TEXTILE BULLETIN

Vol. 50 AUGUST 6, 1936 No. 23

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TRADE MARK REGISTERED
NON-FLUID OIL
IN U.S. PAT. OFFICE & FOREIGN COUNTRIES

Lubricates from 6 to 8 times longer than liquid oils. Less lubricant used and less frequent application result in minimum maintenance cost.

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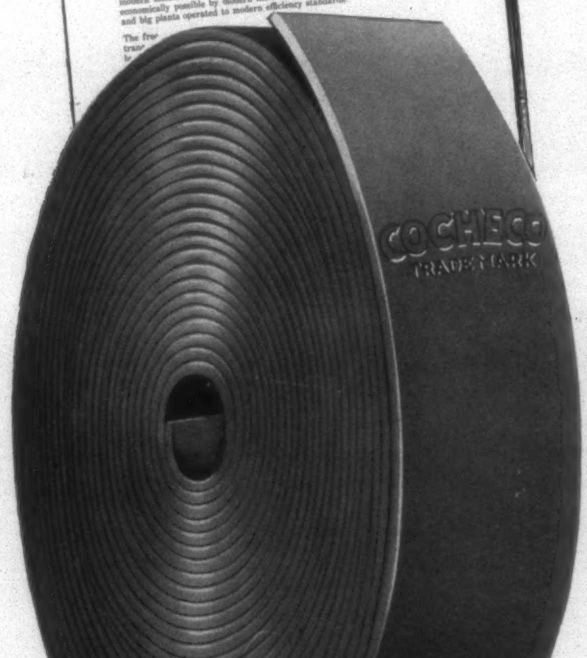

Cocheco Leather Belts

for instance, are power links in the great cotton mills, in public utility plants, woolen mills, machine shops, the railroad shop, the shipyard, paper mills, in the great modern industries behind the automobile and the air ship—standard equipment because of their guaranteed strength, resiliency and long life. Service and durability are tanned into the hides from which COCHECO Belts are made. Satisfaction is in every roll that bears the Cocheco stamp. They insure lower power transmission costs; they are quality belts made to meet the diversified needs of an almost unlimited field.

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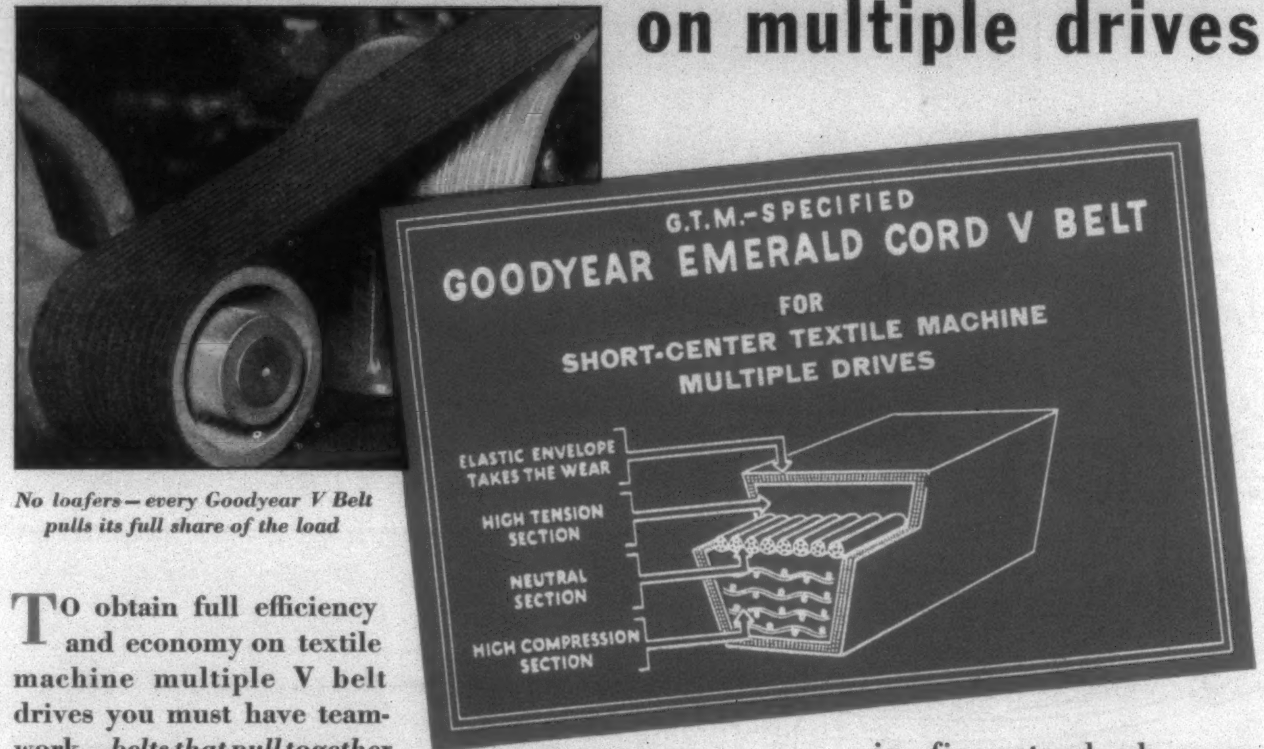

No loafers—every Goodyear V Belt pulls its full share of the load

TO obtain full efficiency and economy on textile machine multiple V belt drives you must have teamwork—*belts that pull together.* And out of its own practical mill experience Goodyear has perfected its famous Emerald Cord V belts that do just that! Every set is matched in length and elasticity and absolutely accurate in cross-section to fit the sheaves with uniform grip and pull — *a perfectly balanced drive.*

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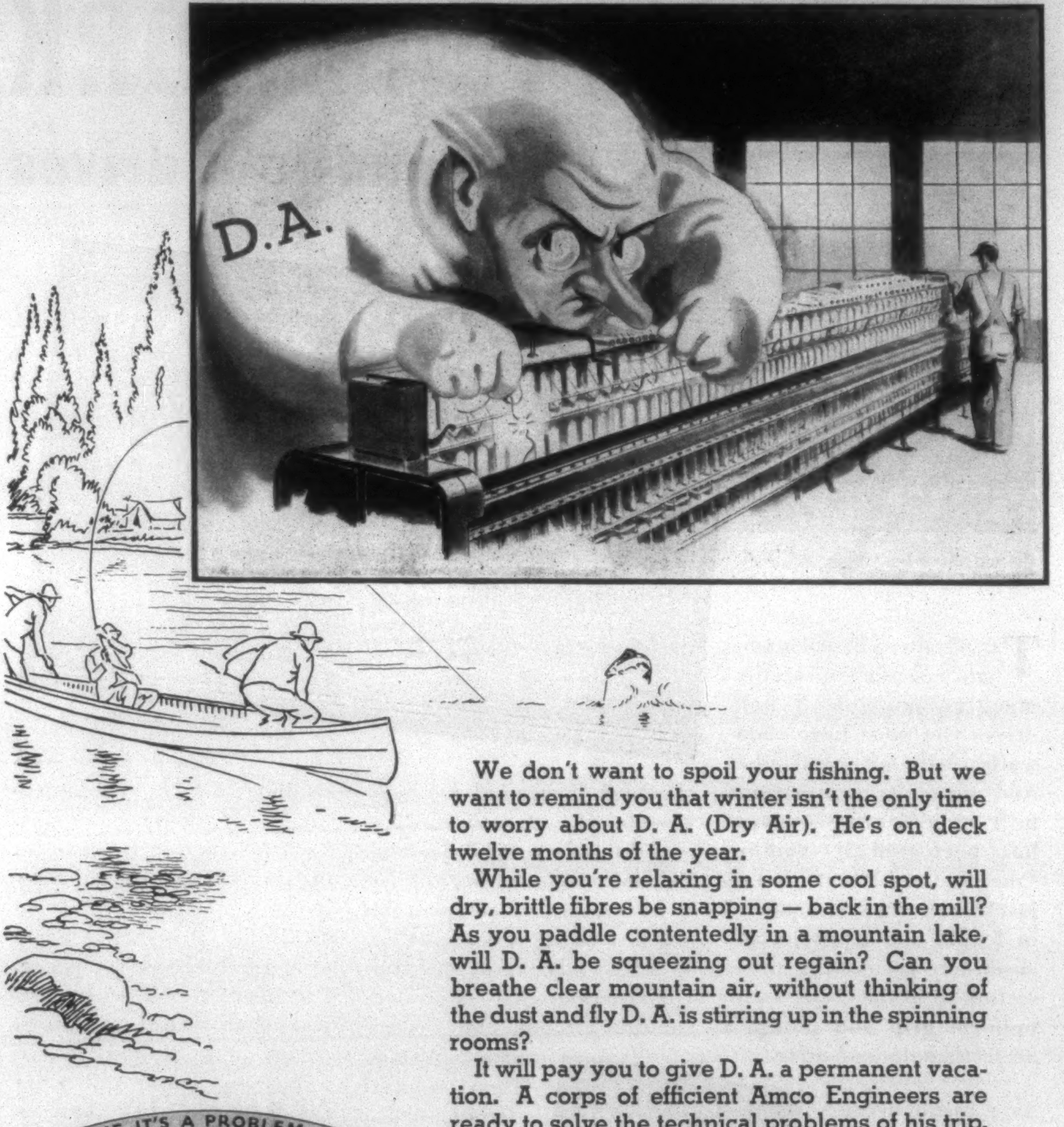

We don't want to spoil your fishing. But we want to remind you that winter isn't the only time to worry about D. A. (Dry Air). He's on deck twelve months of the year.

While you're relaxing in some cool spot, will dry, brittle fibres be snapping — back in the mill? As you paddle contentedly in a mountain lake, will D. A. be squeezing out regain? Can you breathe clear mountain air, without thinking of the dust and fly D. A. is stirring up in the spinning rooms?

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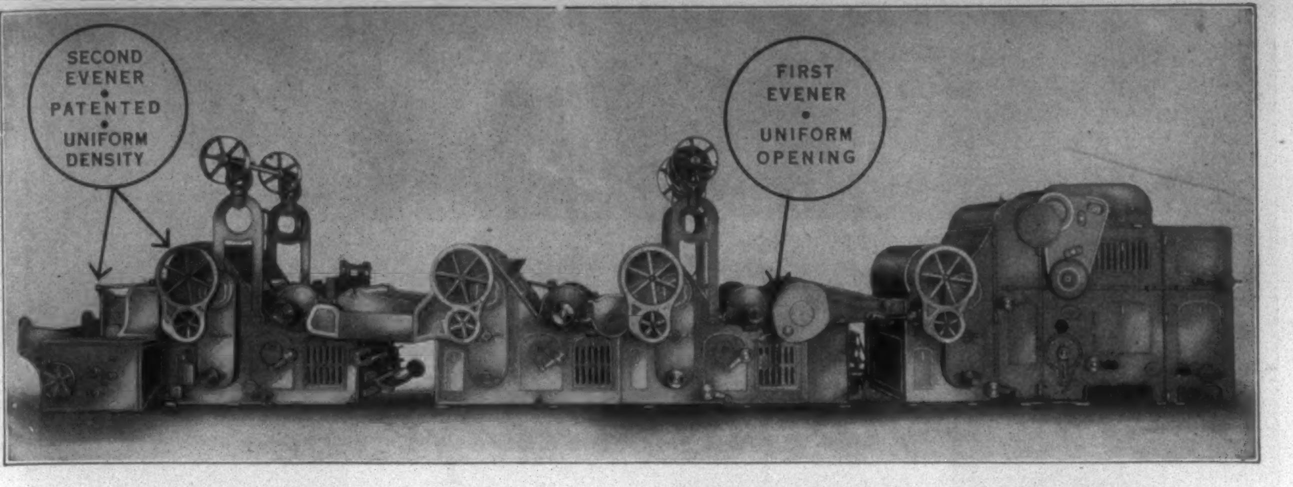

Lower Costs and BETTER LAPS

It is practically axiomatic that one process picking reduces cost of production, handling, power consumption, etc., but the advantages of H & B One Process Picking do not stop here. This system also produces BETTER LAPS.

Much of the latter advantage is due to the H & B patented two-fold method of evening. The first evener, working in conjunction with the feed rolls, provides uniform opening; the second evener, working in conjunction with the calender and cages, provides uniform density throughout. Once the cotton enters the feed section, it remains in sheet form, so that the evening is an uninterrupted process. There is no intermediate hopper to nullify the first evening.

As a result H & B One Process Picking has an average productive efficiency of over 99 percent, and H & B laps vary less than 3/8 to 3/4 of an ounce from yard to yard. One mill reports only 4 laps out of 700 had to be reprocessed; in another case only 4 laps out of 2500; and in a third case only 5 laps out of 1300.

The H & B One Process Picker is also equipped with a hunting tooth, automatic knock-off and measuring device, features of which are easy starting, quick changing for any desired yardage and greater accuracy than any similar mechanism on the market.

Why not modernize your plant with this low cost and quality improving process? Write for details. No obligations.

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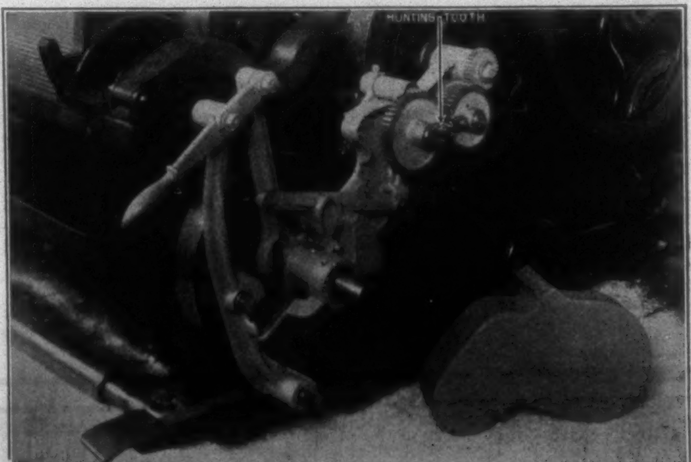

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"THEIR initial cost is no more, yet what a big difference they make in assembling and operating expense!" That's what mill owners who use Armstrong's Cork Cots will tell you. Actual comparative tests *prove* that these seamless cork cots *slice roll covering costs in half!*

Lower Assembling Cost

Precision-manufactured at the factory to fit each mill's individual rolls, Armstrong's Cork Cots cut application costs way down. Assembling is easy. And once assembled and buffed to a fine finish, these cots present a smooth, resilient spinning surface—true and concentric, every cot constant in density from end to end.

Longer Life—Inexpensive Rebuffing

Replacements, too, are less frequent with Armstrong's Cork Cots. Thanks to the long life of cork, these rugged, durable cots give the average service of a normal spinning roll each time they are put into the frame. In addition, the life of these cots can be renewed again and again—as many as five, six, and even more times—simply by rebuffing. And this operation costs only half a cent a roll.

Other Advantages

Add to these money-saving advantages, the production benefits of Armstrong's Cork Cots and it's easy to see why more than 6,000,000 active spindles are already "on cork." The extra cushion and uniform density which result from Armstrong's new *tubular* process of cot manufacture insure the spinning of stronger, more uniform yarn with less end breakage. Write today for full information and samples of Armstrong's Extra Cushion Seamless Cork Cots. Armstrong Cork Products Company, Textile Division, 921 Arch Street, Lancaster, Pennsylvania.

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for spinning and card room rolls

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◄ TEXTILE BULLETIN ►

Vol .50 August 6, 1936 No .23

Cloth Markets in Strong Position

By P. M. Carlisle

THE cotton goods markets enter the August cotton crop estimate in the strongest position in years, and the belief is widespread here that even if a "bearish" estimate cutting fairly deeply into raw cotton values should be issued on Saturday, prices of goods will be maintained. This contention is well supported by the position of mills with respect to stocks and unfilled orders. In the standard wide print cloths, unfilled orders on July 18th were said to have been in excess of stocks by the equivalent of a little better than five weeks' production. Since then, two weeks of sales have averaged about half production, so that the mills now have a "net backlog" of something over four week's current production.

The position in other divisions varies, but is uniformly strong. Sheetings are apparently in the best position, with many constructions sold so far ahead that spots and early deliveries cannot be bought in first hands. Such second hand offerings as are in the market are insignificant.

Those in the markets who like to blame all of the industry's ills upon merchandising have been very quiet in recent weeks, but even they probably will admit freely that the merchandising job in the current season has been commendable. For a time, at the height of the advancing trend, there was some fear that overconfidence on the part of both buyers and sellers would lead to the supposedly inevitable crash later in the season. There have been one or two influences to cushion the market, and to diminish the likelihood of a sharp rise followed by a tumble.

For one thing, as prices were advancing, many mills which had suffered severe losses in the first five months of the year sold goods sparingly, taking only small business at each successive advance. This left them with moderate stocks on hand and a fair percentage of nearby production unsold. When the advance was halted by the approach of the cotton report and the easiness in raw cotton, these goods were in the market for ready sale, and they have been selling consistently for the past few weeks. Without such goods in the market, the shortages elsewhere would have caused further sharp advances which might well have led buyers into a panicky covering of future goods beyond their actual needs. This might have brought too sharp increases in production. The other important influence preventing overconfidence has been the wariness of cotton futures traders, which has made it possible for mills to continue to sell at unchanged prices instead of frequent advances.

The sale of finished goods has run to very large proportions. Such finished goods as are sold without converting, such as colored goods, sheets and pillow cases, towels, bedspreads, blankets, and the like, are booked far ahead. The problem faced by most mills and their selling agents is to meet deliveries against their outstanding contracts. Buyers have made frequent requests for anticipations—cause in many cases by the fact that both garment manufacturers and jobbers were much too conservative in their estimates of needed goods. Many jobbers and manufacturers who had covered what they thought would carry them through September are now virtually bare of goods and are attempting replenishments which in the case of some types of goods are impossible. Requests for anticipations are consistently being turned down because mills feel their first obligation is to meet contract shipments, and any anticipations would disrupt shipping schedules beyond repair.

Given a crop estimate which does not bring a drop of raw cotton of more than 50 to 75 points on the New York futures market, the prospect is for higher gray goods prices. It is altogether probable that the market will move up to a basis of 6½c for 64x60s and 8½c for 80 squares by the first of September, and if these levels are not reached by early September, they are considered virtually certain before the end of that month. At such levels, without any sharp increases in the already high basis for print cloth cotton, mills can make money.

Finished goods also can advance, with as much as a cent a yard possible over the next few months in such staples as denims, chambrays and tickings. Sheet and pillow case discounts are almost certain to be shortened by another 7½ to 10 per cent.

Fine gray goods are headed for an advance, but it will be slow in coming. Mills have good orders on their books and are resisting the pressure from buyers for lower prices. These orders will carry them for several more weeks, and by that time, converters and other buyers must begin to lay down more sizeable contracts against Spring needs.

(*Continued on Page 33*)

Cotton Growing Prospects In Latin American Countries

By Erwin P. Keeler[*]

IN addition to the four more important cotton-growing countries of Latin America, Brazil, Peru, Mexico, and Argentina, which in 1934-35 produced a total of 2,188,000 bales of cotton, there are a number of countries in Latin America in which cotton growing has attained some degree of importance, at least insofar as the internal economic structure of these countries is concerned. Among the smaller producers of cotton in Latin America are Paraguay, Colombia, Venezuela, Ecuador, Bolivia, El Salvador, Guatemala, and Nicaragua. Hati and several of the British islands of the West Indies may also be included in this group of minor producers of cotton lying to the south of the United States. Cotton production in most of these countries has shown an upward trend during the past two or three years, primarily as a result of more favorable prices for cotton in relation to those for other crops.

PARAGUAY

Cotton was grown in Paraguay in considerable quantities during the American Civil War period, but its cultivation was largely discontinued during the years following that conflict. Since the World War, however, and particularly within the past two or three years, cotton production has again become of commercial importance in Paraguay, and the commodity has reappeared in appreciable quantities in the country's export trade.

Virtually all of the Paraguayan cotton grown commercially consists of various varieties of the upland type, many of which are reported to be badly mixed, with resultant variation in staple length and quality. It is generally grown in small plots as a family undertaking, and with but limited use of modern farming implements. Shortage of capital, inadequate and expensive transportation facilities, lack of modern farming and ginning equipment, and competition with other products as yerba mate and tobacco, in addition to unscientific methods of cultivation, are obstacles which, in the past at least, have prevented a wider development of the Paraguayan cotton industry. On the other hand, natural factors in the form of favorable climate and soil, and cheap and plentiful land, are generally considered advantageous to cotton production in Paraguay.

Cotton production in Colombia received considerable stimulus during the World War, when the Colombian textile manufacturing industry, faced with high prices for imported cotton and yarn and with the wartime uncertainties of supply and of shipping facilities, turned to domestic growers for an increasing share of its raw-cotton requirements.

However, while the Colombian Government and the spinning and textile industries have endeavored to maintain and to increase interest in cotton production throughout the post-war years, it does not appear that cotton farming in Colombia has generally been placed on a scientific basis, and considerable quantities of raw cotton and yarn are still imported.

It is generally estimated that 75 to 80 per cent of the cotton produced in Colombia is grown in the north (Caribbean) coast departments of Atlantico, Bolivar, and Magdalena, with the remainder largely divided among Santander, Norte de Santander, Antioquia, and Boyaca. Barranquilla is generally considered the central market for cotton from the three departments of Atlantico, Bolivar, and Magdalena, spinners throughout the country coming to that city to buy. Production in other sections of the country is primarily designed for local consumption.

Cotton is usually grown in Colombia by small independent farmers and, with the exception of one or two mill-owned plantations, is not produced on a scientific basis. Both annual and perennial cottons are grown. Varieties are reported to be badly mixed and much of the cotton irregular staple length and character. It is often sown with other crops, usually corn, and cultivation is largely by hand. Picking is often careless, it being reported that as much as 20 per cent of the crop is lost through improper harvesting. Lack of transportation facilities has also handicapped the average small producer.

Both the Colomian Government and the textile manufacturing industry have been active in endeavoring to overcome these obstacles to increased cotton production and in encouraging farmers to take advantage of the favorable factors, such as climate, plentiful land, and an established textile manufacturing industry.

VENEZUELA

While the growth of a domestic textile industry, coupled with a protective tariff policy applied to both textiles and raw cotton, has probably increased cotton production in Venezuela in recent years, cotton has never become a major crop in that country. Official production and consumption figures are not available, but export and import statistics or recent years indicate that cotton production and consumption have been closely balanced as no appreciable export or import shipments of raw cotton have appeared in these statistics since 1932.

Estimates from private sources place average annual cotton production in Venezuela at 8,500 to 10,600 bales of 478 pounds each. The importation of raw cotton into Venezuela has been virtually discontinued since 1932, when, in line with the Government's policy of protection to agriculture, the duty on raw cotton was increased around 400 per cent, to a figure roughly equivalent at current rates of exchange to 22.7 cents per pound. Previous to this increase in the tariff on raw cotton, production had not kept pace with the requirements of the local textile manufacturing industry, imports of raw cotton during the four years of 1928-1931, principally from the United States, having averaged 2,220 bales per year. The fact that local cotton production during those years was not adequate to meet domestic requirements may also be attributed in part to the shortage in agricultural labor resulting from the rapid development of the petroleum industry.

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[*] Foreign Agricultural Service Division, Bureau of Agriculture Economics, Washington.

The Venezuelan Government has actively encouraged agricultural production, primarily through the medium of the Agricultural Bank, as well as through experiment station work and seed distribution. In the case of the cotton growers, it is reported that mill owners have facilitated production by credit advances to cotton farmers. However, the labor supply in Venezuela is not at all plentiful in the rural districts, particularly since the petroleum industry has developed on a large scale, and, although the country apparently has considerable land suitable for cotton production, it does not appear that Venezuela will produce an appreciable quantity of cotton in excess of domestic requirements in the near future.

Ecuader

While climate and soil in several regions in Ecuador are considered well suited to its production, cotton has never attained the importance of such crops as cacao, coffee, and rice. The domestic textile industry is a comparatively new development, and until recent years these competitive crops usually command more favorable prices than cotton.

Although cotton production until 1935 was not usually adequate to meet domestic mill requirements, the Ecuadoran Government on November 4, 1935, promulgated a decree suspending the further importation of foreign cotton and providing for the purchase of all domestic cotton by the Central Bank at current prices, the bank to resell the cotton to the local mills at cost plus handling expenses.

Over the seven crop years of 1928-29 to 1934-35, cotton production is estimated to have averaged 6,181 bales per year, while imports averaged 2,541 bales. The 1934-35 crop is reported to have totaled 8,150 bales of 478 pounds each.

Practically all of the cotton production in Ecuador centers in the three provinces of Guayas, Los Rios, and Manabi, each of which contributes about a third of the total crop. The land to be planted to cotton is usually cleared by hand labor, and is seldom plowed. Domestic seed is usually planted, although some seed is occasionally imported from Peru. Planting takes place about January and February, with the beginning of the rainy season. The crop is harvested in August or September and is usually shipped to the gins, most of which are located in Guayaquil, in jute bags containing one Ecuadoran quintal (101.4 pounds). Transportation represents an important factor, as most of the cotton fields are 30 miles or more distant from the gins, while in the case of the province of Manabi, it is necessary to ship by coasting-vessels for a distance of around 140 miles.

Over the past three or four years the Ecuadoran Government has shown increased interest in stimulating local cotton production, culminating in the decree of November 4, 1935, prohibiting the importation of foreign cotton. Much of this interest doubtless arises from the Government's desire to decrease the export of capital entailed in purchasing a substantial part of domestic mill requirements abroad. Leading Ecuadoran agriculturists and officials in the Ministry of Agriculture consider that the present acreage in the provinces of Guayas, Los Rios, and Manabi is susceptible of considerable increase. In addition, the province of Oriente, lying to the east of the Andes, at the headwaters of the Amazon, is believed to have large areas suitable for cotton production, but it is doubtful whether this region, because of its limited population and communication facilities, is likely to play an important part in Ecuadoran cotton production in the near future.

Bolivia

Cotton production in Bolivia has not attained any great degree of importance in the agricultural life of the country. While small quantities of cotton are produced in the provinces of Tarija and Santa Cruz, to the east of the Andes chain, the present costs of transportation to La Paz, where the country's only cotton mill is located, appear to be too high to make cotton production in those regions economically feasible. Estimates of production for recent years are not available, but over the 5-year period from 1924-25 to 1928-29 annual production was estimated at approximately 2,100 bales.

The up-to-date spinning and weaving mill erected in Pa Paz in 1928, with 6,000 spindles and 246 looms, depends largely on imported cotton, practically all of which is supplied by the United States.

Reports indicate that Bolivia possesses considerable areas of land in the eastern provinces of Tarija, Santa Cruz, and El Beni which might be adapted to cotton production. However, problems of transportation and inadequate population make it doubtful whether there will be an appreciable increase in cotton production in this region in the near future.

El Salvador

Cotton farming was first undertaken on a commercial scale in El Salvador in the early 1920's, with active Government encouragement, in an endeavor to make the country less dependent on a one-crop (coffee) system. Whereas in 1920 only 20 acres were planted to cotton, in 1923 cotton plantings were reported to have reached 2,000 acres and in 1924 the record figure of 40,000 acres. The Salvadoran Government imported specially selected Acala seed from California, and local planters invested considerable money in cotton cultivating and ginning machinery. As a result of serious inroads of insect pests, however, the 1924 crop proved disappointing, totaling only 10,460 bales of 478 pounds, equivalent to approximately 125 pounds per acre. As a result, 1925 cotton acreage fell off to about 20,000 acres. Primarily as a

(*Continued on Page 20*)

TIGHT BINDING

Fine Filament Rayon Yarns

IT is now generally realized that natural silk and the various kinds of rayon are substances totally different in character and that they should be regarded as in no way competitive. The natural development of rayon fabrics, as all cloth designers agree, was obviously along lines closely parallel to those obtaining in the silk industry. When continuous filament yarns in viscose rayons and acetate were first produced, the deniers of the filaments ranged from five to ten. Thus compared with the filaments in the cultivated natural silks the rayon filaments in the cultivated natural silks the rayon filaments were rather coarse. Consequently, between rayon and natural thrown silk fabrics of similar constructions there was very little true resemblance, especially since the lustre of the rayon was so much higher than that of pure silk. As the rayon industry overcame the many difficulties in the production of continuous filament yarns, it was found possible to make yarns with filaments not greatly exceeding in denier those wound from the cocoons of the silk worms. Another notable advance in rayon yarn production is the reduction of the metallic lustre. Thus today cloths are made from rayon closely resembling natural silk fabrics of similar construction. An examination of the effects on the fabrics of the fine filament yarns now regularly produced should, therefore, prove interesting.

The physical properties of fine filament yarns do not differ appreciably from those of rayon yarns with coarse filaments. The various kinds of rayon normally produced have breaking loads of 1.2 to 1.6 grammes per denier, or rather less than one-half of that of real silk. For diaphanous fabrics such as chiffons, which require strong yarns of low deniers, rayon cannot compete successfully with silk on this account. The high tenacity varieties of rayon, which have strengths equal to or even exceeding that of real silk, are not suitable for fabrics of this class for other reasons. Thus far cloths of the lightest and most delicate kinds natural silk remains the most suitable material.

Among the advantages of fine filament over coarse filament rayon is that of superior appearance. Any cloth composed of fine filament rayon yarns has a lower lustre than a fabric of the same construction but containing coarse filaments of the same total deniers, the intrinsic lustre of the material being the same in each case. This is because a large number of small reflecting surfaces cause a greater scattering of the incident light than a few large reflectors. Polished glass may be rendered translucent by grinding its surface with an abrasive, yet the microscope shows that the minute facets on the roughened surface are smooth and have a high reflecting power like that of the original polished surface. The subdued lustre obtained in fabric by substituting yarns with fine filaments for yarns with coarse ones is preferable to the low lustre produced by the pigmentation of the material. Yarns made from pigmented dopes are usually somewhat weaker than those made from ordinary dopes.

Filament yarns increase the covering powers of the fabrics. An old complaint against rayon cloths was on account of their leanness and poor cover. It is obvious that a given weight of material has a greater light obstructing power in the form of numerous thin filaments than as a few thick ones. Given equal deniers in the filaments and in the yarns, the covering powers of silk and rayon fabrics of the same construction are practically identical.

A further advantage accruing from the use of fine filaments yarns lies in the fullness and warmth retaining qualities of the fabrics made from them. Warmth retaining power depends primarily on the air spaces between the fibres, such properties as thermal conductivity and emissivity having relatively insignificant influences. Of two fabrics having the same weight per square yard, the one constructed from fine filament yarns has the greater number of air spaces than the one made from coarse filament yarns. Consequently the handle of the fabric containing fine filament yarns is fuller and its heat insulating layer of air is more effective.

In the spinning of rayon staple fibre yarns the advantage of fine filaments over coarse ones is likely to prove of considerable importance. It is very well known that the fineness of the fibres is one of the factors that determine the limits to which the fibre can be spun. It is perhaps only in the spinning of staple fibre yarns for rayon crepe weft that the coarser filaments might prove to possess some advantage. However, the mechanism of the development of the figure in crepe fabrics is so complex that it would not be easy to prove the superiority of coarse filaments for this purpose.

The use of fine filament rayon yarns is not always advantageous. Owing to the low tenacities of the ordinary varieties of rayon in comparison with that of natural silk, the breaking loads of filaments of rayon of denier two or less are below one-tenth of an ounce. The yarns must therefore be treated with great care or some of the filaments may be broken. Even the rubbing of the fingers on the surface of the bobbin or pirn may result in broken filaments. Yarns with broken filaments give a very objectionable hairy appearance to woven or knitted cloths.

In the production of continuous filament rayon yarns it is usual to insert only from one and a half to three turns of twist per inch. As the output is roughly inversely proportional to the twist, the insertion of higher twists would necessitate running the pumps extruding the dope more slowly or else increasing the already high spindle or Topham box speeds. To either of these alternatives there are objections and it is usual, if higher twists are required, to insert the extra turns on special twisting frames. There is little doubt that the best results are obtained on ring twisting frames as used for spinning or doubling fine cotton. Other types of machine have been used because of their greater compactness or higher speeds, but much hairy yarn has been produced on them.

For satisfactory knitting and weaving it was found that the usual twists of one and a half to three turns per inch

(*Continued on Page 31*)

IF YOU CAN AFFORD TO IGNORE *ECONOMY*...

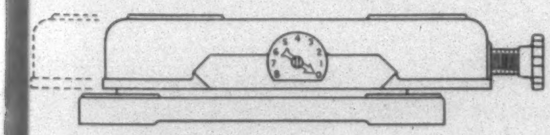
...then ignore this page!

To produce different products on the same machine, different speeds are required. Different speeds have required different drives, and the cost and delay of dismantling the old and buying and installing the new.

The Vari-Pitch Sheave, for Texrope V-Belt Drives, obsoletes all such procedure and its attendant expense and loss of time. This vitally important new development in power transmission permits, through a simple adjustment that takes but a few moments, a variation in speed of from 15 to 25% per sheave, and the minutest control of the variation within that range.

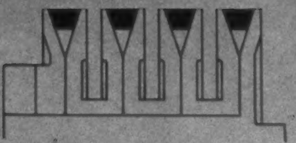
That means you can make a variety of different products on the same machines, some of which may require a higher speed, some a lower; and you can experiment with different speeds to see at just what speeds your machinery develops the highest efficiency.

Vari-Pitch Texrope Sheaves are made for stationary and motion control.



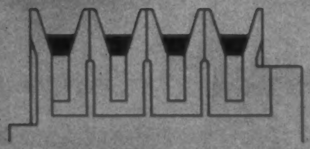
Straitline Automatic Ball-Bearing Motor Base developed for the motion control Vari-Pitch Sheave. You simply turn the hand wheel to alter the diameter of the sheave and simultaneously the base moves forward or backward to maintain proper belt tension. Write for Vari-Pitch Bulletin No. 1261.

Belts by Goodrich



Vari-Pitch Sheave adjusted for maximum diameter-high speed.

15% TO 25% VARIATION IN SPEED



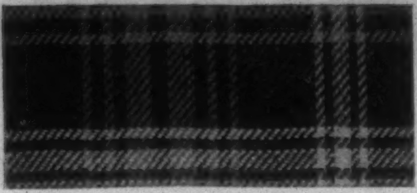
Vari-Pitch Sheave adjusted for minimum diameter-low speed.

TEXROPE DIVISION

ALLIS-CHALMERS

MILWAUKEE WISCONSIN

Men's Shirting for Fall



Swatch 3

Men's shirtings for the coming winter season show a decided tendency toward brighter color combinations and, in the other extreme, soft pastels in the solid colors. There is a very British feeling in the stripes—regimentals and narrow corded stripes. Many of the plaid shirtings, while they are intended specifically for men's wear, would make up excellently for house dresses, both for women and girls. This would seem to be an extremely good idea for increasing the output of these masculine cottons.

Tucked Effects

A large number of the striped and checked madras shirtings have an effect of tucks. This is achieved by an edging of a darker shade to the stripe, frequently further accented by a woven corded stripe. Swatch No. 1 shows a smart green, the corded stripe in darker green, and another corded stripe in white running checkwise. These come in bright blue, brown, purple, gray and pale red. Swatch No. 2 is distinctly British in character, gray stripes edged with black alternating with white, checked with a narrow line of red. Other colorings are bright blue, black and white, and tan, dark brown and white with red.

Cotton Suitings

Suitings for working men's clothes in twills, whipcords and homespuns are much the same this winter as in other seasons, drab grays and browns in herringbone pattern, checks and houndstooth, with a few chevron and chalk stripe designs. A material here and there has taken on a brighter aspect with purple or bright dark blue. With the increasing demand for copies of expensive fabrics in even the lower priced range of cottons, it would seem that these inexpensive cotton suitings could be styled up considerably. Glenurquhart plaids, chalk stripes, overchecks, with a bright pin stripe intermixed with the dark colors, should prove a great impetus to sales.

Wool Effect Shirtings

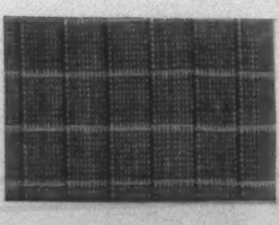
The more sporting type of cottons for men's shirts are gay and colorful. It is particularly in this range that the shirtings could be extended to be used for children's school dresses and women's house frocks. Swatch No. 3 is a tartan in black with the plaid carried out in a deep bright blue, overchecked with white. This comes in a warm red with black and white plaid, and a bright green background with red plaid and white overcheck. Swatch No. 4 is a yarn-dyed houndstooth Oxford, red, black and white. Other color ranges include blue, black and white; brown, black and white; green, black and white, and black and white.

Notes

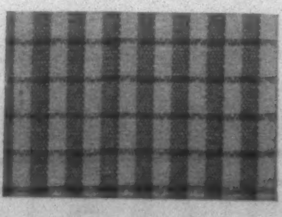
New colors for broadcloths include mocha, gunmetal, pale helio and rose. Purple and lavender show every sign of considerable popularity, with red a close second, although a bright dark blue combined with powder blue is still top favorite. A fancy air-cooled fabric has a large corded check with a dobby weave in one corner of the check. One shirting has a rayon check which has the effect of cable stitching—colors on white. A fine poplin has regimental and Roman stripes in very vivid color combinations. A fancy Oxford has novelty groups of stripes widely spaced, plaid and check effect, all white. Seersuckers have the stripes so close together they look like fine tucks. A linen effect white novelty is checked with a double and treble cord alternately, widely spaced. Heavy cotton shantungs and chalk stripe twills are liked by the designers. Pin checks are shown in all types of shirtings, and are often overchecked with a corded stripe.

Chambray

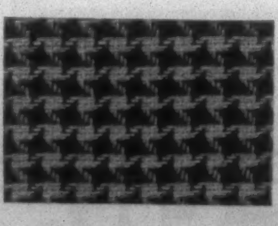
Chambray is a classic favorite for men's shirtings, since it wears and launders excellently. There is so far very little which is revolutionary in this fabric for the winter season. The colorings are for the most part subdued. Swatch No. 5 shows a dobby weave chambray with clip spots. The background is tan, with the dobby in a slightly darker shade, and the clip spots in dark brown and orange. It comes also in bright blue with navy and red, and in gray with navy and deep yellow.



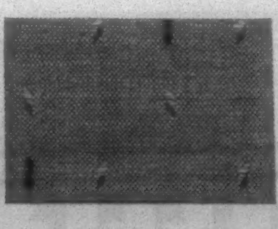
Swatch 1



Swatch 2



Swatch 4



Swatch 5

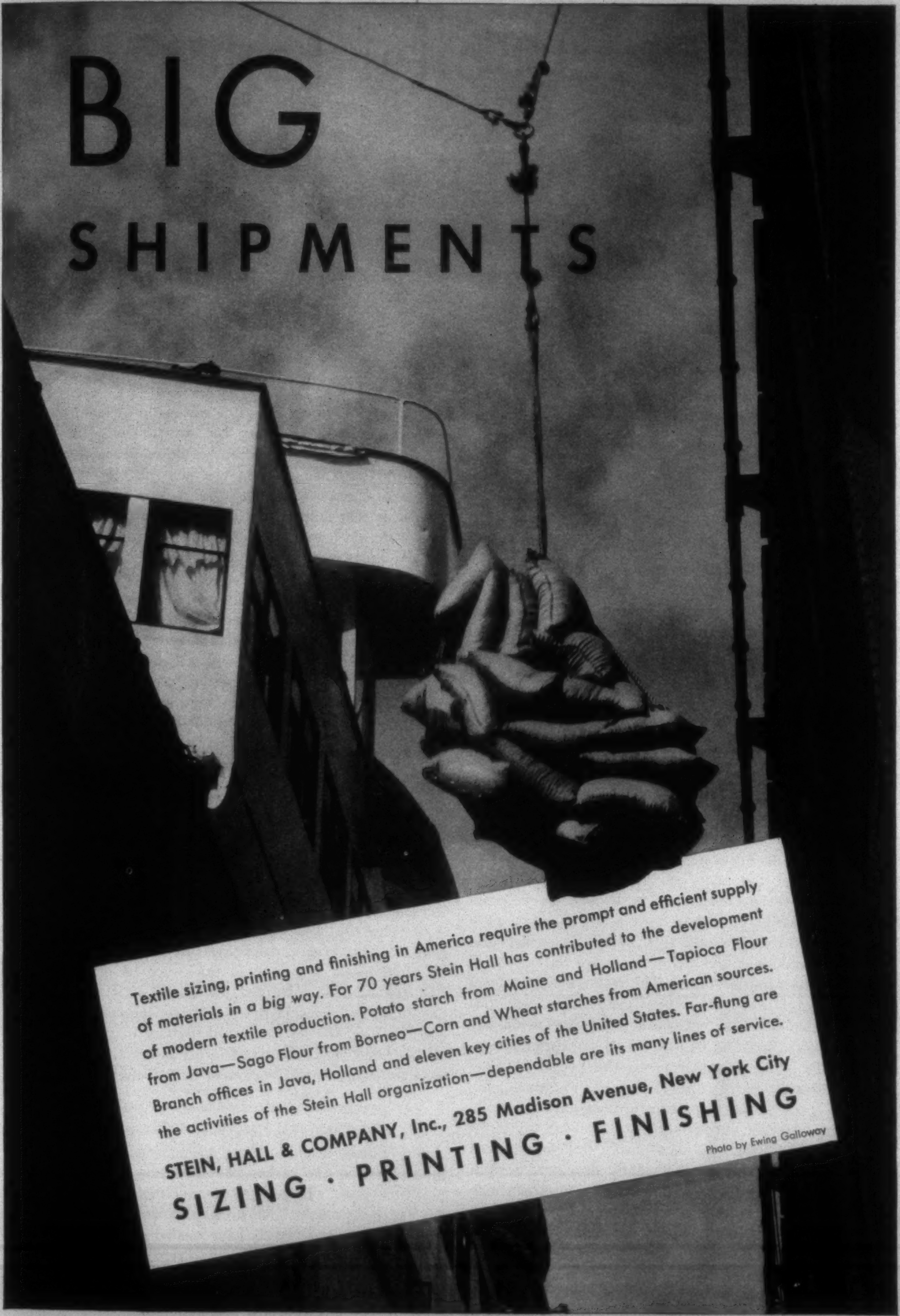


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Photo by Ewing Galloway

Incipient Boiler Failures

IT is difficult to obtain complete information regarding the true condition of the boilers being operated in the United States at the present time, due to the fact that not all of these boilers are insured and many do not come under city or State boiler inspection departments. From the data available, however, it is evident that the gravity of the situation is not fully appreciated.

The condition of the boilers that come under some recognized inspection service may be summarized as follows:

Approximately 50 per cent of the boilers in use are defective to some degree. These defects are of such a nature that they will become serious unless remedied.

About one boiler in seven is seriously defective.

One boiler in one hundred and seventy is definitely unsafe because of serious physical weakness.

The condition of boiler plants as indicated by these figures is not entirely due to lack of maintenance resulting from depressed economic conditions, although it is evident that the "depression" has been responsible for many failures to properly maintain boilers and their appurtenances and for the continuance in service of many obsolete boiler plants that would have been replaced by safer and more economical installations if conditions had been more nearly normal. It also appears that the present situation results more or less directly from changes in design brought about by the normal development in the use of steam in this country. In this connection a brief analysis of this development during the past 40 years is of interest.

When steel for boiler plate became available about fifty years ago, boilers of the horizontal return-tubular, Manning vertical-tubular, and Scotch marine types became popular and were built in intermediate and fairly large sizes. The water-tube boiler had proved reliable and economical, but many engineers preferred the fire-tube type for various reasons. The demand for increased pressures following the development of the high-speed engine and turbine brought the water-tube boiler into wider use because of the definite pressure limitations of boilers of the fire-tube type. The result was that from 1900 on, many water-tube boiler installations were put into operation either as replacements in plants previously equipped with fire-tube boilers, or as new installations. Most of the boilers installed during this period were designed for pressures of from 150 to 160 lb. per sq. in., although those designed for pressures as low as 125 lb. per sq. in. were not uncommon.

Many of the boilers installed during this period, even though well maintained, subsequently developed serious defects. That many of these designs were unsatisfactory was not known at the time and, in some instances, serious failures occurred before engineers awakened to the fact that there were definite defects in certain designs. These boilrs are now from 25 to 35 years old. Many of those that come under the supervision of State boiler inspection departments or insurance companies have had pressure reductions intended to compensate for the effects of age and long usage, but it is doubtful whether any pressure reduction can compensate for defects of the character that have developed. It appears reasonable to conclude that when a boiler develops defects that can be investigated and completely analyzed, the correction is the elimination of the defect or the discontinuance of the boiler from service. A reduction in pressure of from 10 to 20 per cent cannot compensate for the loss of strength, resulting from the defects that frequently develop. A boiler that is not safe at 160 lb. pressure will not be any safer at 140 lb.

HEAD FAILURES

The formula upon which the earlier boiler drum heads were designed, even after the adoption of the first A.S.M.E. Code, was found to permit unsatisfactory design, and the code formula was subsequently modified. The destructive head failures that have occurred and the numerous near failures that have been prevented by careful inspection, clearly demonstrate that the earlier head designs must be regarded with suspicion.

It is true that die marks left on the inside surfaces of heads during fabrication, particularly at flange knuckles, have been responsible for the development of many cases of grooving and cracking which have resulted in failures or necessitated replacement, but it is also apparent that a number of these cases of grooving and cracking would not have developed had the design required heads of a form and thickness that would not flex in service.

EXTERNAL CORROSION OF HEAD AND HEAD SEAMS

Until quite recently, water-tube boilers of the bent-tube type set in battery, were arranged with the inside or blind heads concealed in brickwork. Such construction not only prevents the inspection of the heads and head seams but lends itself to the development of corrosion because of the moisture that may be retained by the brickwork and deposits of ash. This moisture may collect during long shutdown periods, or come from leaking steam lines and leaking tubes. State inspection departments and insurance companies are now insisting that all blind heads concealed in brickwork be arranged so that they can be inspected. If found satisfactory, the possibility of corrosion resulting from dampness may be eliminated by the installation of division plates. Boilers having blind heads concealed in brickwork that have not been subjected to this treatment are of unknown safety.

EXTERNAL CORROSION OF TUBE SHEETS

It is remarkable that there have not been more serious boiler failures resulting from the external corrosion of tube sheets in the drums of water-tube boilers of the bent-tube type. That there are not more failures from this cause is probably due to the discovery of the condition before the tube sheets have wasted away sufficiently to permit failure. It is difficult to remove all of the deposits of ash that lodge on the mud drums of boilers of

(*Continued on Page 32*)

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Rayon Important in Fall Fabrics

Rayons continue very important in the fall fashion picture, reports from the Paris office of the du Pont Style News Service indicate. Both lustrous and dull surfaced styles are being presented by the French fabric houses. Satins, jerseys, taffetas and velvets are also important. Coudurier is having considerable success with lacquered satins and faconne satins with lustrous surfaces combined with dull broche motifs. One of Coudurier's new fabrics is a double-faced satin slightly lacquered on both sides.

In the Coudurier line there are many new rayon jerseys and taffetas with subdued gold flecks in this collection, and new gauze for evening wear which combines a lustrous surface with a gold metal weave. Lame rayon crepes with pebbled surfaces and sometimes broche designs are important. Velvets are much in evidence, and these usually in short pile or duvetyn type or in very lustrous panne-like surfaces. Changeable color effects are noted in some and still others in colored faces and tree-bark finish, a practical rayon velvet suitable for traveling. A mat velvet for evening, a very tight pile velvet and faconne velvets are other versions stressed in this group, which includes also lame velvets and chenille yarns on dull rayon grounds.

New Lacquered Styles

Lacquered effects, jerseys and satins are decidedly important in the fall fabric collection of Colcombet. Among the jerseys are those in very heavy rayon textures—both in bright and dull finish. There are lightweight, even featherweight, Peau d'Ange versions and some rayon jerseys in ribbed and corduroy effects. Featured in both silk and rayon is a very fine jersey known as Triomphne. Another jersey fabric in this collection, and with a slightly more shiny surface than Peau d'Ange, is known as Cocotte.

A patent leather finish is featured in a shiny lacquered satin Joli, Joli, while more subdued or dull lacquered effects are noted on some of the dull crepes, including dull rayon crepes with chevrons or broken rods or knob designs.

Exotic fabrics with jarres of slit cellulose film are shown in this collection, as are Celtacyl fabrics with chevrons and herringbone patterns woven with slit cellulose film and with a lacquered finish over their wool-like surfaces.

Crepe Clocky is featured in several novelty versions—in all-rayons and in rayon and cotton—some with dull finish and others with the clocky design in bright satin and dull background. This crepe includes a number made entirely of satin in rayon and cotton known as Martinique.

Heavy dull rayon crepes are shown in this new Colcombet collection—also featherweight boutonne crepes both in rayon and in silk. Among the satins there are several reversible types—these often with dull contrasting crepe face slightly goffered. There are irregular rayon

(*Continued on Page 28*)

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Let's Talk It Over

DRAPER CORPORATION

Atlanta Georgia Hopedale Massachusetts Spartanburg S C

Personal News

Robert P. Dicks has sold his stock in the Sanford Cotton Mills, Sanford, N. C., and retired as president.

W. A. Hunt, formerly superintendent of the Meritas Mills, Columbus, Ga., has accepted a similar position at the Pickett Cotton Mills, High Point, N. C.

H. C. Duncan, of Chicago, has been appointed auditor in the general offices of the Carolina Cotton and Woolen Mills, Spray, N. C.

T. H. Burkhardt, vice-president of the Burlington Mills and substantial stockholder of the company, and for the past six years connected with this organization in charge of mills and research work, has resigned.

Julius W. Cone, vice-president of the Proximity Manufacturing Company, and Mrs. Cone and their son, Edward Cone, Mr. and Mrs. Edward Dribben have left for a month's trip to Mexico.

J. F. Plexico has resigned as overseer of carding and spinning at Granite Falls Manufacturing Company, Granite Falls, N. C., and accepted a similar position with the Porterdale plant of Bibb Manufacturing Company, Porterdale, Ga.

John Washington Graham and Frederick Phillips Wood have been added to the board of directors of the Edenton (N. C.) Cotton Mills. Mr. Wood is a son of the former president. The other directors include John G. Wood, Julien Wood, George C. Wood, W. D. Pruden, David M. Warren, O. M. Elliott, J. W. Cates and J. A. Moore.

Charles M. McLeod, vice-president of the American Printing Company, Fall River, Mass., is to become executive head of the Consolidated Textile Corporation when it completes reorganization under Section 77-B of the National Bankruptcy Act. He will have charge of the liquidation of several Southern plants that will not be operated in the future.

J. J. Newton has been appointed superintendent of the Fairforest Finshing Company, Spartanburg, S. C. He succeeds Sam Elliott, who resigned some time ago to resume a previous connection with the Delta Finishing Company, Philadelphia. Mr. Newton was formerly connected with the Martin Dyeing and Finishing Company, of Bridgeton, N. J.

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QUALITY SERVICE

Charles W. Folds, of Chicago, has been appointed administrative assistant to Luther Hodges, production manager for the Carolina Cotton and Woolen Mills, Spray, N. C.

Ray A. Butler, who has been director of the industrial engineering division of the Carolina Cotton Mills, Spray, N. C., has been promoted to head of this division of all of the other plants of Marshall Field & Co., located in this area. He will continue to make headquarters in Spray.

Girls Receive Textile Degrees

This year the Textile School of North Carolina State College awarded degrees to two young women who had completed all the requirements for graduation in the weaving and designing curriculum. These young women, Misses Eleanor Green and Virginia Reinheimer, both Raleigh girls, are the first women to receive undergraduate textile degrees at State College. Both of them have accepted positions with the Carolina Cotton and Woolen Mills at Spray.

Miss Reinheimer is assistant designer at the Spray Woolen Mill and Miss Green is assistant in the designing department of the cotton mills.

Steel Heddle's Olympic Contender

Textile men will be interested to know that an employee of the Steel Heddle Manufacturing Company is a member of the U. S. Olympic team now competing in the events in Germany.

William Dugan, age 23, who has been employed by the company for the past three years, represents the U. S. in the senior double shell entry with John Hauser. Although he his young at the sport (starting in 1924), he was won championship after championship, the last being the National Championship and Olympic tryouts at Philadelphia on July 4th.

Three Generations of Three Families Work for Avondale

Pell City, Ala.—Three families employed in the Avondale Mills here boast three generations working in the mills at the present time.

James Madison Hesterley, 83, has worked in the Pell City Mills for 30 years. He is the father of B. B. Hesterley and grandfather of Jewell Hesterley Watson, both of whom followed in his footsteps. John R. Jones, 80, who has been employed in the mills since 1902, has a daughter and a grandson in the mills. James T. Windsor, 73, has seen service for 62 years. Working in the mills also are a son and grandson of Mr. Windsor.

Sinclair Changes Territorial Assignments

G. C. Wilson, industrial sales representative for Sinclair Refining Company in western North Carolina for a number of years, has been appointed representative for the entire State of South Carolina, and in the future will make his home in Columbia.

G. C. Wilson

C. C. Nix, formerly of Raleigh, N. C., succeeds Mr. Wilson in the western North Carolina territory and is now making his headquarters in Charlotte.

Mr. Wilson is well known in the textile industry in this section and has many friends who will be glad to learn that he has been given a larger territory.

Du Pont Will Drop Quantity Rebates

The du Pont Rayon Company will eliminate quality rebates on both viscose and acetate rayon yarns after September 30th, in accordance with the Robinson-Patman bill, it was announced. All yarn shipped this year previous to June 19th will be subject to the discounts hitherto in effect. On actual shipments from June 19th to September 30th, a flat 5 per cent will be allowed to all customers.

The formal statement, issued by Leonard A. Yerkes, president of the rayon company, follows:

"In accordance with the recently passed Robinson-Patman bill, we wish to announce that quantity discount schedules which we have had in effect heretofore have been discontinued as of June 19, 1936.

"The discounts earned up to that date will be made ratably to an annual basis and settlement made promptly.

"From June 19th until September 30th, 1936, inclusive, we will allow a flat 5 per cent to all customers on all shipments actually made between these dates .

"After September 30, 1936, all shipments will be made at present scheduled prices (unless changed in the meantime), with no discount allowances except the regular cash discount.

"The above applies to both viscose and acetate rayon yarns."

Enterprise and Sibley To Consolidate

Augusta, Ga.—The stockholders of the Enterprise Manufacturing Company and the Sibley Manufacturing Company have voted for consolidation of the two mills under the name of the Sibley Enterprise Company.

For a number of years the two companies have been consolidated in practically every respect except the legal, but because there are a half dozen other concerns in the country with the name Enterprise, it was thought wise to change the name.

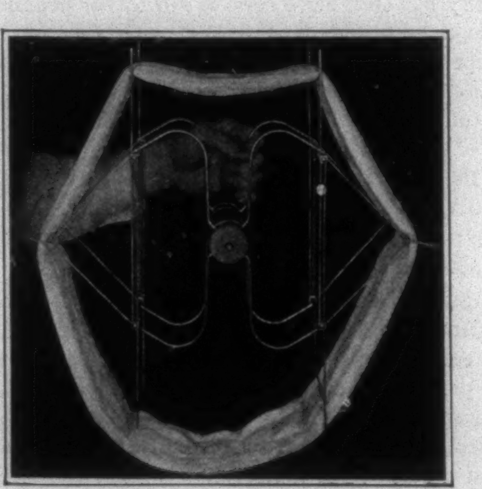
The holders of 4,110 out of 5,000 shares of Enterprise stock and 7,338 out of 9,000 shares of Sibley stock were present or represented at the meeting. They voted unanimously for consolidation on the recommendation of their directors and of a joint committee composed of two representatives from each mill and a neutral member.

Attorneys for the new company will apply to Superior Court for an amendment to its charter authorizing the change of name. The consolidation also will involve issuance of 5,000 shares of new Enterprise stock.

New Spooling and Winding Swift

A new adjustable, collapsible, self-tensioning, high speed swift for spooling and winding silk, cotton, rayon and other fibres from skeins, has been developed by the Hugh F. Burton Company, Providence. R. I. The swift is described as being collapsible with pressure from one hand, leaving the other free to apply and adjust the skein. Tension is regulated by a stop screw.

The company describes how the skein is applied as follows:



"By taking the swift in one hand, see illustration, and exerting a slight pressure on the arms, the skein may be readily applied with the other. Replace swift in bearings or holder and spread skein to full width, straighten and adjust. When applying the first skein, of the lot selected, leave the stop screw loose and when the skein has been spread and adjusted then set the stop about three-quarters of an inch from the cross member. No further adjustment of the screw is required as long as skeins of the same circumference are being used. By setting this stop screw as mentioned the skein has a uniform tension exerted at all times during the run off and the swift is prevented from expanding beyond the desired limit when the last turns are coming off."

Advantages claimed for the swift include increased production and the elimination of sagging strings, curling twisting and piling of the skeins.

OBITUARY

D. B. HEDGPETH

Fayetteville, N. C.—Durwood B. Hedgpeth, formerly secretary of the Holt-Morgan Cotton Mills, died after a brief illness. Mr. Hedgpeth had been engaged in the brokerage business here for a number of years. He is survived by his widow and a son, also three brothers and a sister.

Cotton Growing Prospects in Latin American Countries

(*Continued From Page 9*)

result of the same pests, the 1925 yield was even more disappointing than that of 1924, amounting to only about 2,092 bales, equivalent to 50 pounds per acre. Following these two unsuccessful crops, very little cotton was planted in 1926, and from that year until 1934 production was negligible.

Salvador now has two cotton spinning mills, the first of which, with an annual capacity of approximately 600,000 pounds of yarn, was established in 1932. In order to meet the requirements of this newly established spinning industry above the domestic supply of raw cotton, the country imported 1,335 bales of cotton in 1933 and approximately 1,100 bales in 1934, practically all from the United States.

As a result of low coffee prices, the attention of the country has once more been drawn to the weaknesses of a one-crop system, and it has again been decided to atempt to grow locally at least enough cotton to meet the requirements of the domestic spinning industry. By decree of October 10, 1934, the duty on imported raw cotton was quadrupled, a rate of $9 United States gold per 100 gilograms (4.08 cents per pound) being made effective. Preliminary estimates placed the 1935 requirements of the domestic spinning industry at 5,230 bales of 478 pounds.

El Salvador is the most densely populated of the Central American republics, with 109 inhabitants to the square mile. In addition to a plentiful labor supply, the 1924 peak cotton acreage would indicate that El Salvador has a considerable amount of land suited to cotton production. Hence, it would seem that future prospects for cotton production in that country will depend largely on the results obtained in combating the insect pests which were the primary cause of the failure of the earlier attempt at cotton production.

GUATEMALA

Cotton production in Guatemala has never been of any great commercial importance to the country, although the crop has long been grown on a small scale. Private estimates place average production over the 10-year period from 1921-21 to 1929-30 at approximately 700 bales per year. Most of the Guatemalan cotton is grown in small scattered plots of land, under rather primitive methods of soil preparation and cultivation, probably the only exception of importance being in the case of one of the two domestic textile factories, which in 1930 was reported to have about 450 acres planted to cotton.

This mill, located at Quetzaltenango, attempts to encourage cotton growing by private producers, furnishing seed and instruction. As yet, however, it does not appear that any widespread interest has been reveloped in cotton production, and Guatemala imports a considerable part of the requirements of the two domestic textile mills. Over the five years from 1931 to 1935, the United States, which supplies the major part of Guatemala's imports of raw cotton, shipped an average of 979 bales (500 pounds each) of cotton per year to that country.

ragua's Northwestern provinces of Chinandega and Leon.

NICARAGUA

Cotton has long been grown on a small scale in Nica- It is reported that during 1924, a year of unusually heavy plantings, about 5,000 acres were given over to cotton in the departments of Chinandega and Leon. However, insect pests discouraged planters, who usually consider that a good crop can be obtained from virgin soil, but that a second planting on the same soil is likely to result in serious loss from insect pests.

Within the past year or two, under the stimulus of relatively favorable prices for cotton, there has been a considerable revival of interest in this crop in Nicaragua. It is estimated that 1935 plantings reached a figure in the neighborhood of 7,000 acres and that the crop. harvesting of which is now being completed, will probably approximate 3,000 bales.

HAITI

Cotton production has come to occupy an increasingly important place in Haitian agriculture during the past 10 or 15 years, with exports of this commity ranking second only to coffee in the value in recent years and accounting for about 10 per cent of the value of total Haitian exports.

Most of the Haitan cotton crop is grown on the west coast of the island, in the regions about Saint Marc and Gonaives, the first of these towns being the major export center for Haitan cotton. Smaller quantities of cotton are also grown for export along the southern coast of Haiti.

Cotton is grown in Haiti chiefly by small peasant farmers, often as a semi-wild crop, with little attention once it is established, beyond gathering the crop and cutting the plants back after the harvest. A great deal of progress has been made during recent years, however, in increasing production and in improving the quality of the Haitaian crop. Stabilized political conditions, improved communication, and active Government assistance to workers have been among the factors contributing to the increase in cotton production. The Haitian Agricultural Service, with the aid of American technicians, has been extremely active in fostering improved agricultural methods and in the development and distribution of improved varieties of seed. Export shipments in commercial quantities have been made recently of an improved variety of long-staple native cotton which was developed through scientific seed selection.

Haiti possesses an abundant supply of cheap labor, with an average of 250 inhabitants to the square mile, but the supply of land suitable for cotton production is limited. Although definite figures are not available, estimates of agricultural experts placed the total area devoted to ttcoon in 1930 at 170,000 acres, with perhaps double this amount available for future production.

BRITISH WEST INDIES

While total production is not large, cotton is a traditional crop in several of the British West Indian islands, and at present they represent the major source of supply of Sea Island cotton. At the end of the eighteenth cen-

(*Continued on Page 28*)

World Carryover 7, 106,000 Bales

The world carryover of American cotton, that is, the world stock on August 1st, was approximately 7,106,000 bales, according to a preliminary estimate of the New York Cotton Exchange Service. This compares with 9,041,000 bales last year, 10,701,000 two years ago, and a maximum, in 1932, of 13,263,000 bales.

"In predepression years, the world carryover of American cotton averaged about 5,000,000 bales," says the Exchange Service, "but that was at a time when world consumption of the American staple was averaging around 15,000,000 bales a year. If the carryover is judged in relationship to consumption, which is now running between 12,000,000 and 13,000,000 bales a year, a normal carryover would be considered to be around 4,000,000 to 4,350,000 bales. Hence, although the world carryover of American cotton this year is only a little more than half the maximum reached in 1932, it is well above normal.

GOVERNMENT STOCK 3,200,000

"Of the carryover of 7,106,000 bales this year, roughly 3,200,000 bales are being carried by the Government against loans to growers in private hands. The stock in private hands is thus not far below normal, in relation to consumption. During the past year, the Government has reduced its holdings of spot cotton by close to 2,000,000 bales, the sale of which has largely averted a very tight spot situation this summer, except on qualities that are in relatively short supply.

"As has been the case in recent years, particularly during the period while the Government has been carrying large stocks, an unusually large portion of the carryover is being carried in this country. The domestic portion of the carryover this year is estimated at 5,481,000 bales, and the foreign portion only 1,625,000. In 1927, when the world carryover was 7,845,000 bales the domestic portion was only 3,662,000 and the foreign portion 4,183,000. The decrease in the foreign portion reflects in large degree the decrease in foreiegn consumption of the American staple, but the foreign portion would doubtless be much larger if it were not for the fact that between 40 and 50 per cent of the carryover is being carried by the United States Government in this country."

New Onyx Catalog

A new 56-page handy-size catalog describing its entire line of processing and finishing compounds has just been published by the Onyx Oil & Chemical Co., 15 Exchange Place, Jersey City, N. J.

The products described cover bleaching, sizing, scouring, dyeing, finishing and printing, on silk, rayon, cotton, wool hosiery, mixed fabrics and ribbons.

In addition to the products, the catalog also includes other helpful information, among which is a comprehensive article by Dr. H. H. Mosher, research director, on the subject, "The Importance of Accurate pH Control."

A copy of the new catalog may be obtained free of charge by writing to the Onyx Oil & Chemical Co. at the above address.

RHOADS TANNATE CHECK STRAPS

Have given users greater freedom from trouble, fewer replacements and less production time lost, because they last so long.

On Model X Looms, at 190 to 200 picks per minute, Tannate Check Straps have shown unusual length of life. And the length of life is a mighty important matter in check straps. For the time out to change a strap may cost, in lost production and lost wages, far more than the Tannate Check Strap.

How would you like to have Check Straps, and other textile straps and leathers of quality, that stand up to their jobs, for many months, and save you trouble.

RHOADS TANNATE BELT PRESERVER

Will make your Rhoads Belts, or other leather belts, last longer and give more efficient transmission service, because it lubricates the fibers of the leather, keeping the belt from becoming dry and harsh.

Tannate Preserver also saves power losses by preserving the right kind of pulling surface and maintaining the power transmitting capacity of your belts.

In the making Rhoads Leather Belts receive the quantities of lubricants to give them the right belt texture for efficient service. As this lubrication is lost in service. renewing it with Rhoads Tannate Belt Preserver will keep your belts more fit.

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Has America Failed?

During the past few years, there have been many statements about the failure of what some like to call the "capitalistic system."

Men with unproved and untried ideas have proclaimed them as superior to the system of government under which we have lived for 150 years and in order to promote opportunities for installing their pet theories, have belittled our system and proclaimed it as an abject failure.

So loud and so frequent have been the proclamation of those who have attacked our system of government, that many have come to believe that something evil has existed and that under the old system men and women have been drifting into slavery and extreme poverty.

The people have been told that under the "capitalistic system" which has existed, great corporations and rich individuals have taken all and that the average run of citizens have been stripped clean and placed in bondage.

Without entering into politics we wish to lay before our readers certain facts and allow them to be the judges. Most of the information we are publishing is taken from a recent open letter by Prof. Gus W. Dyer of Vanderbilt University, but the facts are worth repeating.

About 7 per cent of the people of the world live in the United States and it is the condition of this 7 per cent which we wish to discuss. The other 93 per cent live in about sixty other countries and under many systems of government.

The real question to be determined is whether or not the 7 per cent who live under our form of government, live better or live worse than the other 93 per cent, many of whom live under systems closely approximating those which are now advocated for this country.

Let us first consider the farmers of the United States.

In 1930, 2,911,644 farms were owned wholly by those who operated them. There was no sort of mortgage on 1,765,907 of these farms.

Total value of all farms wholly owned by operators	$21,123,468,000
Total mortgage indebtedness on these farms	4,080,176,000

Nowhere else in the world do any large per cent of farmers own their farms.

Manufacturing has been represented as being in the hands of a few and we have been told that the small manufacturer had no chance to compete with the great corporations.

In 1929 there were 210,959 factories of all types in this country.

7,426	of these factories had no employees. The owners did the work.
95,757	of these factories had less than 5 employees.
53,524	of these factories had from 6 to 20 employees.
25,022	of these factories had from 21 to 50 employees.

Thus we see that 181,739 of our 210,959 factories were small and records show that the small factories gave employment to approximately 1,500,000 people.

The period from 1925 to 1930 has been pictured as the heydey of capitalism, but during that period there was an increase of 22,561 in the number of factories, but many of them must have been small, because the number of employees per factory decreased from 44 to 41.

Nearly 300,000 people were working in factories employing less than 5 people and the facts given above do not sustain the charges of monopoly which have been recently hurled against American industries.

Charges of monopoly have been made against chain stores and they have been pictured as driving small retail stores into bankruptcy.

In 1929, which is pictured as the peak of the growth of capitalism and monopoly, the following were the statistics:

Total number chain stores	144,598
Total number single store independents	1,230,300
Total number two and three store independents	64,583
Net sales chain stores	$ 9,445,127,000
Net sales independent stores	35,761,713,000

The census shows that from 1920 to 1930 the number of retailers increased 375,247, and as the total number of chain stores did not then exceed 145,000, it is evident that instead of small retail stores being forced out of business as charged, they actually increased at a remarkable rate.

In 1849, 41,000 persons per million population were employed in factories, but in spite of the assertions that machinery has thrown people out of work, there were 76,000 per million population employed in 1929.

The average annual wages received by factory employees in the United States have been:

1849	$237.00	1889	445.00
1859	288.00	1909	518.00
1869	303.00	1929	1,314.00
1879	349.00		

Under the hated capitalistic system the average annual income of the workers increased from $237 in 1849 to $1,314 in 1929.

Nowhere else in the world do the annual incomes of the workers even nearly approach those in the United States and in most countries they are today approximately the same as ours of 1879.

In most countries of the world the factory workers can barely exist upon the wages which they receive and nowhere do they live upon the same scale as our employees. Foreign workers seldom dream of owning radios or automobiles.

We are pictured as a nation of giant corporations and yet the 1931 statistics show the following:

182,447 corporations had total assets of less than $50,000.
61,144 corporations had total assets of less than $100,000
63,428 had total assets of less than $250,000.

Thus 307,019 of our 381,088 corporations in 1931 could be classed as small.

Our ancestors came to this country to escape the tyranny of governments which had no constitutions and gave no protection or equality of opportunity to the little man.

When they established our government they wisely adopted, for the protection of every man, the Constitution which is now attacked by those who can not force their ideas upon our people without submitting same to a vote.

When our government and our Constitution was established we were a poor people without sufficient assets to give proper backing to an issue of currency, but in spite of the charges that ours has been a capitalistic government which has oppressed the people, and favored corporations and monopolies, the following were the facts a few years ago:

In 1930, 52,729,000 persons had saving deposits of the value of $28,479,000,000.

In 1930, 12,336,754 members in Building and Loan Associations had assets of the value of $8,824,119,000.

In 1930, 112,212,000 life and industrial insurance policies were in effect in this country, having a face value of over $100,000,000,000. In 1931, the assets of these insurance companies had a value of $20,159,940,000.

Beck Misunderstands Our Editorial

Since our last issue went to press we received notice from Albert P. Beck that, in his opinion, he had been damaged by statements contained in our editorial of April 23, 1936, entitled "A Collossal Liar."

For the benefit of Beck and our readers we wish to call attention to the fact that the term was used in reference to Frank L. Dobbs, who, as stated in the editorial, claimed that he had proof that Albert P. Beck was interested in programs of sabotage and communistic violence. We did not so state, but on the contrary, said that Dobbs had not been able to furnish proofs to that effect and that he could not prove his charges against Beck. In order that there be no misunderstanding and as we do not wish to do an injustice to Beck we repeat:

WE DID NOT CHARGE BECK WITH PROGRAMS OF SABOTAGE AND COMMUNISTIC VIOLENCE, COMMUNISTIC EMPLOYMENT OR AFFILIATIONS. WE HAD NO PROOF OF SAME AND AS FAR AS WE LEARNED, NEITHER DID DOBBS ALTHOUGH HIS TELEGRAM TO US SO STATED. OUR EDITORIAL EXPRESSIONS RELATIVE TO FRANK L. DOBBS STILL STAND.

In 1929 there were approximately 26,000,000 stockholders in the less than 3,000 listed corporations.

As a final bit of evidence we wish to quote from the report of a European Commission which came to this country, some time ago, to study conditions.

The findings of the commission were:

1. Seven per cent of the people in the whole world living in the United States under the American plan had more purchasing power than all of Europe.
2. This little group has created and owned more than half the wealth of the world.
3. From only 6 per cent of the world's acreage we harvested more than half of the world's foodstuffs.
4. We have half of the world's communicating facilities.
5. We have nearly half the world's railway and electric energy.
6. We produce 92 per cent of the world's automobiles.
7. We have 22,000,000 automobiles in use that run over 600,000 miles of paved road.
8. This little 7 per cent of the world's population enjoyed standards of living which enabled them to consume:

(*Continued on Page 27*)

LESS COST WITH A CLUTCH-LESS DRIVE

1 belt for 12 spindles in straight line.
Eliminating serpentine drive reduces spindle wear and doubles life of belt.
Larger spindle pulleys allow larger motor pulley—more efficient belt contact.
End pulleys equipped with large-capacity oil cups.
Extra end idler pulleys remove strain from end spindles.

ALSO

1. Eliminating clutch and driving pulleys reduces maintenance cost.
2. Saving in time and labor for mechanical supervision.
3. 11 spindles can run while 1 is stopped for repairs.
4. Slow start reduces end breakage.
5. Machines can be laid out in straight line.

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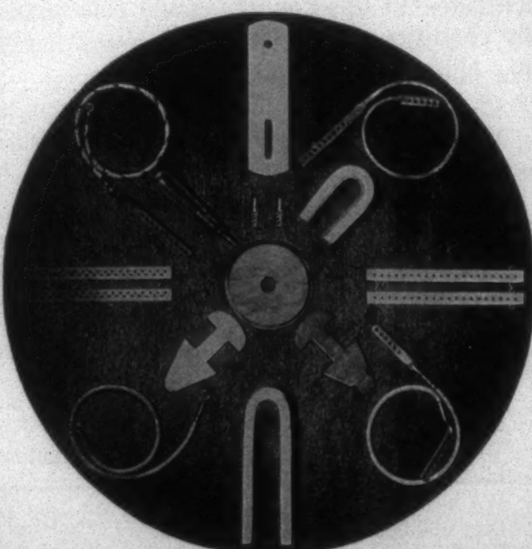

Millbury, Massachusetts

Mill News Items

Valdese, N. C.—Twenty warp machines and 20 BH PW machines have been installed in the Waldensian Hosiery Mills here.

Gastonia, N. C.—Several hundred dollars' worth of loose cotton was ruined by a fire which broke out in the picker room of the Armstrong Mill.

Fountain Inn, S. C.—The Fountain Inn plant of the Woodside Cotton Mills had its large smokestack blown off during a storm recently.

Columbia, S. C.—Richards Textile Engraving Company of Greenville, S. C., which proposes to do a genera' textile engraving business under an authorized capitalization of $5,000, has been chartered. The principals include William H. Richards and Mrs. Kate L. Richards.

Lakeland, Fla.—F. L. Body, manager of the Lakeland Chamber of Commerce, is in the East negotiating for the establishment of a hosiery mill at Lakeland, according to W. F. Cook, president of the local trade body.

Panama City, Fla.—A charter has been issued to the Pure Silk Hosiery Mills, Inc., of Panama City, which has an authorized capitalization of 100 shares, no par value. H. Lees, E. Lees and J. H. Gross are the principals.

Athens, Ga.—The new plant of the Rodgers Hosiery Company is nearing completion. It will cost about $500,000 and will have a monthly output of 200,000 pairs of silk hose. C. F. Rodgers is president.

Tennille, Ga.—The Washington Manufacturing Company are having their slubbers and intermediates erected and overhauled, the work being done by the Dixie Spindle & Flyer Co., Inc., of Charlotte, N. C.

Berryton, Ga.—The Berryton Mills are overhauling their machinery, using the Guillet overhauling system, which is furnished by the Dixie Spindle & Flyer Co., Inc., of Charlotte, N. C., on a weekly rental basis.

Winchester, Va.—A building here has been leased by the Oscar Nebel Company, Inc., Hatboro, Pa., into which it will move approximately 30 full-fashioned hosiery machines, it is stated. The company has a total of approximately 70 machines in Hatboro.

Official information could not be obtained as to whether the Virginia plant was to be a branch, or all of the Hatboro machines are eventually to be moved South.

Decatur, Ala.—The contract for the air conditioning installaiion at the Alabama Hosiery Mills' new addition has been awarded to the Parks-Cramer Company of Charlotte, N. C. The new addition, which is well under way, measures 210 by 105 feet, which will double the former floor space of the mills.

This expansion program will represent an expenditure of approximately $250,000, it is stated here.

The addition to the Cooper-Wells Company, which will cost approximately $15,000, is being rapidly constructed.

Mill News Items

SANFORD, N. C.—Negotiations were concluded here for sale of stock in the Sanford Cotton Mills, owned by Robert P. Dicks, his family and a group of friends, to Warren R. Williams, vice-president of the corporation ,and his associates.

Involved in the transaction are 576 out of a total of 2,494 shares outstanding at par value of $100. The price paid for the stock was not announced.

It is understood that the sale of the stock will bring to a close the controversy existing for several weeks between Mr. Dicks, the president and treasurer of the corporation, and some of the directors over policies of management.

The disagreement had been taken to court with three restraining orders issued. These were scheduled to be heard August 5th before Judge Marshall T. Spears in Durham, but these will, in all probability, be dissolved without a hearing.

The directors will hold a special meeting soon to elect a successor to Mr. Dicks, who relinquished his position upon sale of his stock.

ROME, GA.—R. C. Jones, agent in charge of the Tubize Chatillon Corporation's rayon plants here, said the contract for the $2,800,000 expansion program authorized by stockholders in New York, had been given to Robert & Co., Atlanta, as consulting engineers.

Jones said the company now employs approximately 1,350 persons in its acetate and viscose plants in Rome and the expansion of the viscose department would add between 300 and 400 persons to the payroll.

The program would also necessitate new homes for the workers and the addition of spinning, twisting and other machinery. The company has a model village here.

Jones declared he expected ground to be broken for the development about September 1st and that it would increase the viscose production from 10,000,000 pounds annually to 16,000,000 pounds.

The Hopewell, Va., plant, which will receive about $300,000 of the expansion fund, makes the knitted fabrics from the yarns made here, Jones said.

Kendall Co. Nets $288,445 in Half

The Kendall Company and subsidiaries report for the first 24 weeks of 1936 net profit of $288,445, after depreciation, bond interest, provision for estimated Federal and Canadian taxes (including an amount for surtax on undistributed earnings), and provision for dividends on preferred stock of a subsidiary in the hands of the public. This compares with a profit of $104,866 in the corresponding perio dof 1935. After provision of $94,340 for the regular dividends on the series A preferred stock, the net profit was $194,105. The profits reported are subject to the usual audit and adjustment at the end of the company's fiscal year.

The 7 per cent preferred stock of Mollohon Manufacturing Company, the entire common stock of which is owned by the Kendall Company, was called for retirement on July 1, 1936. The company's balance sheet as of June 13, 1936, shows current assets of $8,517,186, current liabilities of $3,068,197 (including $711,600 required for the retirement of the preferred stock of the Mollohon company), with net working capital of $5,448,989.

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Hosiery Shipments in Sharp Increase

The National Association of Hosiery Manufacturers reports that total shipments of all types of hosiery during June, 1936, amounted to 8,846,704 dozen pairs. This was an increase of 1,334,153 dozen pairs, or 17.8 per cent, over shipments for the same month one year previous. Shipments of all types of hosiery for the first half of 1936 were 5.8 per cent greater than for the first half of 1935.

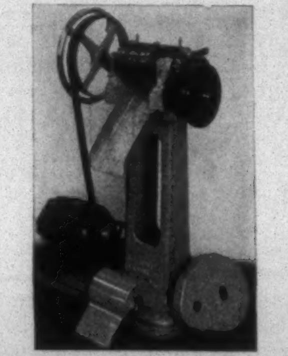
Each of the major branches of the hosiery industry shows an improved demand so far this year as compared with the same period a year ago with the exception of the woolen goods branch. The increases range from 2 per cent in the case of women's full-fashioned shipments to 13.6 per cent in the case of women's seamless hosiery, excluding wool.

Total production of all types of hosiery in June, 1936, was 9,478,988 dozen pairs, which was 632,284 dozen pairs greater than shipments for the month. Stocks of all types of hosiery on hand at the end of June, 1936, at 19,708,733 dozen pairs, were 452,750 dozen pairs more than stocks at the end of June, 1936, due chiefly to increases in stocks of children's and infants' hosiery, ribbed goods and woolen goods.

The first half of 1936 saw a very notable improvement in the stock position in the women's full-fashioned branch of the industry and stocks in most of the seamless branches now seem at a sound level. At the end of January of this year stocks of women's full-fashioned hosiery on hand were over 1,000,000 dozen pairs greater than at the end of January, 1935, while at the end of June, 1936, stocks of women's full-fashioned hosiery were only 44,110 dozen pairs greater than at the end of June.

New Cutter Produces Staple From Cellophane

A special machine for cutting cellophane bands into staple for mixed spinning has been developed by the F. J. Stokes Machine Company. The staple produced by this recently developed machine is suitable for use in making lame cloth or specialty yarns.



Consisting of a 20-bladed knife which operates at approximately 750 R. P. M. with synchronized feed for the cellophane, the machine makes about 15,000 cuts per minute and is driven by a 1/4 H. P. motor.

The cellophane is fed to the machine in continuous length and in a width equal to the staple length required. Several bands can be fed to the machine at the same time, greatly increasing its production. Knives are of the self-sharpening type and the stationary blade is adjustable with micrometer accuracy. All moving parts are carefully guarded and the multiple-bladed knife is carried in adjustable roller bearings.

Cotton Cloth Imports for June Biggest Since 1925

Washington.—The largest monthly importation of cotton cloth for more than 11 years is recorded by the Department of Commerce.

The total importation of cotton textiles from all countries during June was 14,624,000 square yards and compares with an earlier record importation of 17,867,000 square yards in March, 1925, according to the Department of Commerce.

The heavy June importations, it is believed by commerce officials, are probably due to the efforts of importers to accumulate stocks in this country before the recent advance in duties on certain classes of cotton cloth becomes effective.

The total importation of cotton cloth for consumption for the six months ended June 30th was 63,766,000 yards, valued at $5,511,000, compared with 36,623,000 square yards, valued at $3,877,000 for the corresponding period of 1935. Japanese goods accounted for 12,038,000 square yards of the June imports and for 45,290,000 square yards in the cumulative half-yearly total.

Imports for consumption from Japan of bleached cloths during June totalled 10,552,000 square yards valued at $456,000, compared with 4,497,000 square yards, valued at $178,000, during May. Imports of printed, dyed or colored goods during June amounted to 1,487,000 square yards, valued at $94,000, compared with 1,013,000 square yards, valued at $58,000, in May.

Has America Failed?

(*Continued from Page 23*)

(a) Half the world's coffee.
(b) Half the world's rubber.
(c) Three-fourths the world's silk.
(d) One-third the world's coal.
(e) Two-thirds the world's crude oil.

Radicals and reformers are falsely broadcasting that this country is in the hands of a few rich men and that all other persons are virtually in a state of slavery.

The constitutional form of government which in one hundred and fifty years has brought us from poverty to the state described in the report of the European commission, is attacked by those who offer forms of government which have been tried in many sections of the world and always failed.

Conditions in America are not ideal, or not what they will be as we make progress in the years to come, but our citizens, including our factory workers, enjoy more of the good things of life than those of any other section of the globe.

Every loyal American can afford to get down upon his knees and thank God for our ancestors and for the Constitution which they adopted.

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A practical book on Carding and Spinning. Price, $1.00.

"Cotton Mill Processes and Calculations"

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Third edition. Completely revised. An elementary text book for the use of textile schools and home study. Illustrated throughout. Price, $2.00.

"Remedies for Dyehouse Troubles"

By Wm. C. Dodson, B.E.

A book dealing with just that phase of dyeing which constitutes the day's work of the average mill dyer. Price, $1.50.

"Cotton Spinners Companion"

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Nuform Check Straps

Patent No. 1863271
July 14, 1932

Patent No. 1993531
March 5, 1935

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Cotton Growing Prospects in Latin American Countries

(*Continued from Page 20*)

tury, before the development of cotton production in the United States, these islands are said to have been England's chief supplier of raw cotton.

During recent years, cotton production in the British West Indies has been confined almost exclusively to Sea Island, aside from a limited amount of Marie Galante cotton. Data covering production of Marie Galante cotton are not available, but exports, all from the islands of Granada and St. Vincent, were equivalent to an average of 837 bales (478 pounds each) per year over the 9-year period from 1925 to 1933.

The area devoted to Sea Island cotton in the British West Indies averaged 11,696 acres per year over the 12-year period from 1921-22 to 1932-33. Average annual lint production was 1,485,000 pounds, equivalent to 3,106 bales of 478 pounds net, the average yield per acre having been 127 pounds.

Consumption of Sea Island cotton has fallen off during recent years, as a result of competition from other types of cotton and from artificial silk and of the decline in demand for luxury artificials, such as lace, during the depression years. Producers in the British West Indies organized in 1933 the West Indian Sea Island Cotton Association, which fixed for each island (a) an acreage allotment for the 1934 planting, (b) the maximum amount of lint from the 1934 crop to be exported, and (c) the amount of this lint which could be held unsold in the United Kingdom and Europe at any one time.

Under this plan, the 1934 acreage allotment for the various islands was fixed at a total of 5,700 acres, maximum lint exports from the 1934 planting were not to exceed a total of 787,000 pounds (1,646 bales of 478 pounds), and the amount of lint to be held abroad unsold was not to exceed 551,130 pounds (1,153 bales of 478 pounds) at any one time. Complete data concerning the operation of the plan in 1934 are not available, although it was reported subsequently that the island of Montserrat planted 4,000 acres of cotton, or double the acreage (2,000 acres) allotted it under the agreement. Holdover stocks as well as any 1934 production in excess of that originally contemplated appear to have been disposed of successfully, however, as visible stocks at the end of November, 1934, were reported at 678,000 pounds (1,418 bales of 478 pounds) against 1,004,790 pounds (2,102 bales of 478 pounds) at the end of November, 1933. Further, at a meeting of the association held in Nocember, 1934, it was agreed that the total acreage allotment of the various islands for the year 1935-36 should be approximately 8,500 acres, to produce 1,250,000 pounds (2,615 bales of 478 pounds) of lint.

Rayon Important in Fall Fabrics

(*Continued from Page 16*)

satins with tricotine face. For evening there are new fluorescent satins in rayon, as well as rayon satins with contrasting face woven with metal.

There are a few rayon failles in this collection—some quite heavy for evening coats and some slightly goffered. There is a dull faille striped with bands or satin—a fabric made of sil kand rayon combined. There are some goffered effects with Lastex yarns and rayon satins. A new rayon satin features moire motifs and leaf designs.

This collection shows also new etamines in rayon with something of a wool and tweed appearance. For evening there is a new gauze fabric with very tiny stripes of slit cellulose film and a few moires of the rayon stratosphere of last season. Some of the white rayon clockys featured for evening have large blisters woven with gold.

Velvets are featured only in evening types in this collection, these including some dull rayon versions with short pile and duvetine finish. There are some fluorescent types with very long furry pile—these for evening coats. There are also some rayon and cotton reversible velvets and a new type with one face in rayon panne and the other in dull duvetine. This group also includes some numbers with velvet motifs in flower designs over voile grounds.

Neild Sees Higher Prices for Goods

Boston.—"Government-induced scarcity plus drouth conditions," said Frank I. Neild, president of the National Association of Cotton Manufacturers, "has reduced the prospects of a carryover of staple cottons almost to the vanishing point. For the first time within the experience of the present generation of manufacturers, the almost complete lack of staple cotton carryover will be the direct cause of higher prices for manufactured goods will follow in natural sequence, for at least two reasons:

"(1) Hour and wage regulations of the former cotton textile code are being generally observed in the Northern division of the industry. There is a strongly held and widespread sentiment among the vast majority of manufacturers that code wage and hour standards are fair to both worker and management. With continued general observance of these standards seemingly assured, higher prices for manufactured goods appear certain.

"(2) There is a strong and fast growing determination to avoid cutting prices below sound market levels. During the depression years this practice not infrequently caused losses. It is true that operating at a loss, in many cases, permitted the maintenance of high employment levels and prevented disruption of manufacturing organization. Nevertheless, operating losses lead inevitably to bankruptcy and lost jobs. With many mills booked well into the fall, there is a strongly-marked cutting. This, of course, means higher prices."

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The Norma-Hoffman Bearings Corporation, Stamford, Conn., announces that all its wholly-enclosed, sealed Precision Bearings are now being packed with a greast pretested for maximum stability and, as a precaution against the effects of grease oxidation, are being wrapped in aluminum foil. This method of testing greases and packaging the bearings is a result of long investigation by the company's research department, with a view to safeguarding its customers against the difficulties resulting from the oxidation and premature hardening of ordinary greases.

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Hosiery Imports From Japan Higher

Hosiery shipments to this country by Japanese manufacturers continued at the high rate this past June that has been noted since the first of the year. The 198,704 dozens shipped here from Japan during that month reached in fact the all-time high of 198,744 dozens. A year ago for the same month the imports from Japan amounted to only 54,284 dozens. These figures are from compilations by the National Association of Hosiery Manufacturers, based on data released by the Bureau of Foreign and Domestic Commerce.

The value of the June imports from Japan amounted to $65,201 against $19,320 for the same month in 1935. The average value per dozen of the Japanese imports this June was, accordingly, 32c. This represents a slight rise, namely, of 2c a dozen over the average value of imports for the previous month of May.

SIX MONTHS' FIGURE HIGH

For the first six months of this year, January to June, the hosiery imports from Japan ran into the important figure of 895,889 dozens. A year ago for the same six months the imports from that country were only 206,202 dozens. The serious increase in such imports, as shown by the first half-year figures, bear out the market knowledge of the growing competition felt by the domestic manufacturers of similar hosiery, which is for the most part men's half-hose of cotton alone, or mixed with rayon.

The total imports of all kinds of hosiery from all sources during June were 217,432 dozens, or only 18,688 dozens above the figure shipped here by Japan alone. Similarly the total imports for the first six months of this year were 1,033,229 dozens, of which, as noted, Japan supplied 895,889 dozens.

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R. I. Cotton Mills Co-operate With School of Design

Members of the Rhode Island Textile Association have arranged to provide free scholarships in the Rhode Island School of Design.

The scholarships will begin with the opening of the school early in the fall and will include courses in all branches of the textile industry.

Among the mills co-operating are:

U. S. Finishing Co., Sayles Finishing Co., Providence Braid Co., Manville-Jenckes Corp., American Woolen Co., Atlantic Mills, Joseph Benn Corp., Collins & Aikman, J. & P. Coats, Inc., Cranston Print Works, Crompton Co., B. B. & R. Knight Corp., Greenville Finishing Co., Dempsey Bleachery & Dye Works, Warwick Mills.

Fine Filament Rayon Yarns

(*Continued from Page 10*)

in continuous filament rayon yarns with medium or coarse filaments was insufficient for fine filament yarns. To increase the twist naturally increases the cost of the yarns and the additional process provides further opportunity for the breaking of filaments. This addition of twist defeats at least one of the objects in using fine filament yarns, for the covering power of a cloth diminishes with increase in twist in the yarns. The extra twist also has the effect of apparently reducing the lustre. Thus it is seen that the use of fine filaments in yarns for knitting and weaving is not entirely advantageous.

The elastic properties of the various kinds of rayon, as measured by such constants as Young's modulus and the modulus of rigidity, are distinctly inferior to those of natural silk. This has to be borne in mind in the construction of fabrics required to possess the characteristics of certain types of natural silk fabrics. For rayon crepe filling the use of fine filament yarns instead of those with coarse filaments is undesirable. The twist in crepe weft yarns is so high that no contribution to the covering power of a crepe fabric is made by the filling, and there is consequently no advantage in the use of fine filaments on this account. Further, the resistance to twisting, and therefore the tendency to untwist and cause development of figure, increases enormously as the area of cross section of the filaments increases.

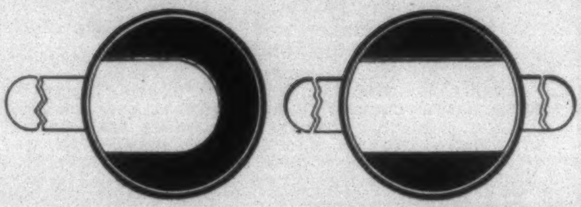
Fine filament yarns generally yield a greater suppleness in fabrics than do coarsely filamented yarns. For cloths produced by the knitting processes the fine filament yarns do not specially recommend themselves, since the necessary suppleness and flexibility of the fabrics can readily be obtained by the continuous looping construction fundamental in knitting. Even those types of rayon, which with medium and coarse filaments gave harsh fabrics when used as both warp and weft in cloths with tightly interlacing weaves produce fabrics of satisfactory handle and flexibility when knitted.

When fine filament yarns are used there must be greater care in handling the material than is necessary with medium and coarse filaments. More frequent and careful inspection of thread guides, shuttle eyes, etc., is imperative since roughness which can be ignored with coarse filaments will cause hairiness in fine filament yarns. Hairiness is not easily detected until the yarn appears in the cloth and usually the only course open to the manufacturer is to degrade hairy fabrics, since cropping or singeing are entirely out of the question for cloths composed of continuous filament yarns.

Finishers have sometimes been blamed for the fault of hairiness in rayon fabrics made from fine filament yarns. It is easy to show, however, that the fault must nearly always arise at some stage of manufacture previous to weaving or knitting. If the filaments were broken by contact of the cloth with rough surfaces, the lengths of the hairs would not exceed the length of the longest float in the weave. Usually they are longer.

Without doubt the production of fine filament rayon yarn marks a great advance. Many fabrics are obviously immensely improved in several respects by the use of

ROUND
SAFETY
EDGES
AND
ENDS



Why shouldn't workmen prefer Stanley Bale Ties! The Round Safety Edges and Round Safety Ends, cut with the Stanley Round End Cutter, eliminate all possibility of dangerous cuts and scratches to hands and arms.

When you can get these important safety features at no additional cost, isn't it logical to standardize on the Stanley Bale Tie System? More and more mill men think so.

Features of Stanley Bale Tie System

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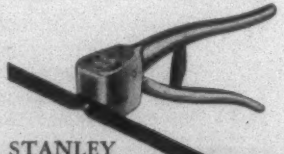

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Solid—Ground—Flake—Liquid

Full strength and effective action guaranteed when you specify SOLVAY Caustic Soda, because of scientifically controlled production standards.

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The Ideal Non-Separating, Dripless, Wasteless Textile Lubricant
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House of Service
To North and South
Established 1904

Seydel Chemical Co.

Jersey City, N. J.

Greenville, S. C. Lowell, Mass.
Harold P. Goller Francis B. Boyer

these yarns instead of the coarse filament yarns hitherto available. This discussion shows the need for careful consideration before adopting the new yarns, particularly in the case of cloths of proved appeal and popularity. Theoretical treatment of such properties as resistance to wear is hardly possible. Practical tests can best show whether fabrics made from fine filament yarns are superior or otherwise in wear to similar cloths composed of coarse and medium filament yarns. The producers of rayon yarns, in overcoming the difficulties inherent in the manufacture of fine filament yarns, have rendered great service to the textile industries.—*Textile Weekly*.

Incipient Boiler Failures

(*Continued from Page 14*)

this type. These deposits of ash, when damp, will cause rapid corrosion of the tubes and tube sheet. Corrosion of this kind appears to attack the tubes just above the tube sheet and the tube sheet surfaces adjacent to the tube holes. The tubes having thin walls in comparison to the tube sheets usually give warning of this condition first. It should be noted that the amount of metal lost through external corrosion of this kind cannot always be properly gaged at the tube hole because the areas slightly removed from the tube holes frequently are the most seriously affected.

Corrosion of Box Headers

Box headers sometimes develop cases of external and internal corrosion. The brickwork and asbestos or other packing at the sides and under box headers often become water soaked when the tubes are cleaned, or leakage from hand-hole caps may provide a constant source of moisture at these points when boilers are in operation. Over a period of years the areas exposed to such dampness will corrode to a dangerous degree.

Serious internal corrosion usually takes the form of grooving at flange knuckles and in wrapper sheets adjacent to the flanged ends of tube and end sheets. The grooves in flange knuckles may have their inception in tool or die marks, but this type of defect is usually aggravated by faulty design. The plate used is sometimes found to be too light for the pitch of the header staybolts, which, of course, is determined by the pitch of the tubes. The condition is aggravated when the plates waste away from internal or external corrosion during years of service.

Cracking of Boiler Metal

Without attempting either to defend or to oppose certain current theories regarding caustic embrittlement, it must be admitted that during recent years the necessity of boiler water treatment has been greatly increased and that some water treatments have been followed by serious cases of boiler metal cracking. The increased necessity for boiler water treatment appears to be due to a number of reasons, the principal ones being operation of boilers at higher ratings and the necessity of using water containing increasing amounts of scale-forming solids as the level of the ground water in certain sections of the country has receded. There are undoubtedly many boilers in operation that have cracks in their riveted areas to a greater or lesser degree. Careful inspection and the chemical control of feedwater has prevented many serious failures. The development of leaks in the riveted seams of a boiler should always be regarded as a warning of the possible existence of a serious condition, requiring complete investigation before repairs are attempted.

Repairs and Replacement

Practically all of the defects outlined in the foregoing may be eliminated by proper repairs, but is it economical or desirable to make such repairs in many cases? For example, when a case of blind head corrosion or cracking has been detected in a bent-tube boiler it is not unusual to find a serious tube-sheet corrosion, not to mention corrosion of the rear bank tubes. The replacement of a tube sheet or drum necessitates the retubing of the boiler. When this has been done at considerable expense, the plant owner still has a boiler whose pressure will be limited by the age of the drums that were not renewed.

In boilers of the box-header type, locally corroded areas frequently can be satisfactorily repaired by careful welding, but, if the replacement of a header is required, the boiler must be retubed and again the plant owner has made a material investment for major repairs but still has an old boiler.

It is believed, therefore, that the boilers of which we were so proud 20 or 30 years ago, must be regarded with suspicion in so far as their safety is concerned until they have been proven absolutely safe by a thorough and complete inspection. Further, it is evident that when boilers in this group require major repairs, the question of replacement should be given careful consideration.—D. L. Royer in *Combustion.*

Cloth Markets in Very Strong Position

(*Continued from Page 7*)

Fancy goods have begun to move in substantial amounts for Spring, and it is apparent that buyers are going to put in more worry about deliveries than about prices.

The one cloudy element in the outlook is the matter of how high consumers will go on cotton goods prices. Retail sales have been consistently higher for several months, and these have been at advancing prices, but retailers have not begun to reflect replacement costs. Jobbers are still selling standard items at such prices as 7⅝c for 36-inch unbleached muslins, bleached 9/4 sheeting at 27¼c branded 81x108 sheets at $11.50 a dozen and 26-inch solid color chambrays at 5½c. When full replacement is reached, there may be some recession in retail sales. The fact that most jobbers and garment manufacturers got into the buying movement fairly early and therefore got a low average on their season's takings, however, indicates that replacement prices at retail will not be reached for some months.

Greenville, S. C.—Indications that the textile industry is more active than in a number of months is shown by reports that many mills in this section have their output sold from three to nine months in advance.

One of the largest and oldest mills in this section has sufficient orders booked to insure steady operation until next April. Many others, also, have booked orders that will insure running steadily until in the late fall. In view of this activity, there is little fear of any curtailment program becoming necessary this summer or fall.

FOR MILL WALLS
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AFRICA EUROPE
Trade Mark Registered
SAVE-LITE
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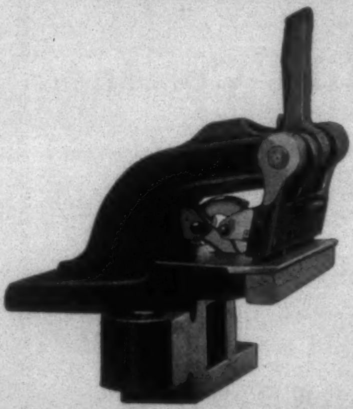

FROM Sheerest TO Heaviest: ONE Clip!

The new M & W Speed Clip gives a tight grip on all classes of materials: from sheerest silks to heaviest cottons, and all thicknesses in between. Hardened plate, hardened jaws, hardened bushings, heat treated rivets. Designed right and built right for today's faster speeds. See it!

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Cotton Goods Markets

New York.—Cotton goods markets reflected a further slowing up in sales of gray goods, although finished goods continued in good demand. Business in print cloth constructions was about half of production for the week. Buyers who already have large commitments were inclined to await developments pending the government cotton estimate to be issued this week. Gray goods prices held firm in spite of the slower business. In some constructions were not available for spot or nearby delivery. Orders on hand in standard print cloths are estimated to be equal to four weeks production and production continued on a normal basis.

The demand for goods for industrial purposes continued fairly active and prices were strong. Fine yarn goods in the gray were quiet although some good business was placed on fancy constructions.

There was no slacking up in the demand for a wide variety of finished goods and many mills are finding it hard to keep up with deliveries on some styles.

Trading in carded broadcloths brought out no new prices and the delivery situation remained about the same, with some mills offering early deliveries of each construction, while others were sold ahead on the entire list.

Sheetings were sold in moderately good volume as a total for the week, although few instances of large individual orders were reported.

The rayon cloths markets showed further strength and many houses were withdrawn from the market on all constructions. Occasionally buyers were able to find a few sellers still offering scattered constructions and these were taken up quickly. It was said that further advances for the entire list were planned this week, and judging by the tight position of both yarns and cloths and the persistence of mills in the previous advances buyers will find it necessary to pay the new asked levels.

Current quotations on cotton goods were:

Print cloths, 27-in., 64x60s	4⅜
Print cloths, 28-in., 64x60s	4½
Gray goods, 38½-in., 64x60s	6⅛
Gray goods, 39-in., 80x80s	8⅛
Gray goods, 39-in., 68x72s	7⅛
Brown sheetings, 3-yard	8½
Brown sheetings, standard	9
Tickings, 8-ounce	15½
Denims	13
Brown sheetings, 4-yard, 56x60s	7⅝
Dress ginghams	16
Staple ginghams	9

J. P. STEVENS & CO. Inc.
Selling Agents
40 - 46 Leonard St., New York

Cotton Yarn Markets

Philadelphia, Pa.—The yarn markets were strong last week although many buyers will not be in the market again until after the government crop report. A number of yarn users show more interest in future needs but their prices ideas were generally lower than spinners would consider. The market here shows that spinners are intent on preventing a price decline and if the crop report is bullish, further large buying at higher prices is expected. The yarn movement continued large during the week and that the call for prompt shipment is stronger than normal for this season of the year.

Chief trading activity was confined to deliveries extending through the next three months. Part of the covering movement involved contracts for shipments through the coming month or two. Combed yarn spinners found interest extended into the early months of next year, little of which was noted in the carded section. Certain spinners were not loathe to accommodate buyers desirous of covering into the first quarter of 1937.

Combed and mercerized yarns have not had the slight lull that the carded yarns had. They have been active for the past three weeks. Some spinners advise that for the first time since 1925 they are now in a position to make real money, something that they have not been able to do since that time. With fourteen to sixteen weeks' business on their books and every prospect of a second boom in the early fall they feel that they should end the year well in the black, instead of the red as they have been for some time.

The strongest part of the list, aside from mercerized yarns, is the fine carded group, which is well sold ahead, with yarn mills busy handling delivery specifications and a good many of them unwilling to add to their bookings until after the middle of next month.

The following quotations are as of September 1st:

Southern Single Skeins

8s	25½-
10s	25½-
12s	26 -
14s	26½-
20s	28 -
26s	31 -
30s	31½-
36s	37½-
40s	38½-

Southern Single Warps

10s	25½-
12s	26 -
14s	26½-
16s	27½-
20s	28 -
26s	31 -
30s	31½-
40s	38½-

Southern Two-Ply Chain Warps

8s	25½-
10s	26 -
12s	26½-
16s	27½-
20s	28 -
24s	30½-
26s	31½-
30s	33½-
36s	37½-
40s	39 -

Southern Two-Ply Skeins

8s	25½-
10s	26 -
12s	26½-
14s	27 -
16s	27½-
20s	29 -
24s	30½-
26s	31½-
30s	33½-
40s	39 -

Duck Yarns, 3, 4 and 5-Ply

8s	25½-
10s	26 -
12s	26½-
16s	27½-
20s	29 -

Carpet Yarns

Tinged Carpets, 8s, 3 and 4-ply	23 -
Colored stripe, 8s, 3 and 4-ply	27½-
White carpets, 8s, 3 and 4-ply	25 -

Part Waste Insulating Yarns

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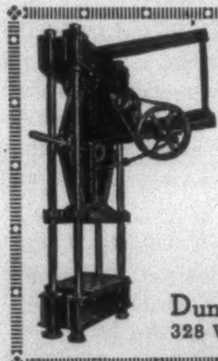

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Visiting The Mills

By Mrs. Ethel Thomas Dabbs (Aunt Becky)

KINGS MOUNTAIN, N. C.

PHOENIX MILL BOOSTER CLUB HAS ANNUAL OUTING

When 88 healthy, red-blooded Southerners charter a whole floor at a summer resort hotel it goes without saying "that a good time was had by all."

The Phoenix Mill Booster Club, 88 strong, including the mill president and assistant treasurer, Messrs. E. A. Hamrick and L. W. Hamrick, chartered two big Carolina busses, took additional automobiles, and on a recent Friday went to Myrtle Beach, stopped at the Carolina Hotel, took a whole floor and adopted for their motto: "*Let joy be unrestrained.*"

For honest-to-goodness wholesome fun and frolic, this crowd can't be beat. Each tries to get a joke on the other, and a kodak is always ready to take snap-shots that are ludicrous and maybe hard to explain. The tales told when they get back to Phoenix might wreck happy homes if the good wives were not loving, trustful and understanding.

Superintendent C. G. White was found late at night watching the moon rise over the Atlantic. He was gesticulating in a way to put band directors to shame, and singing "When the Moon Comes Over the Mountain." (Imagine a man mistaking the Atlantic for a mountain!)

More than that, Mr. White got home with his two best white suits smeared with lip-stick!

We have it on good authority that J. M. James, the 240-pound overseer of weaving, lost his pajamas—to be explicit—a lady took them and refused to give them up! (He tried to explain that it was a pair of doll pajamas that he had in his vest pocket.)

The weather was unbearably hot, and as there were only men on this hotel floor, nobody cared for sleeping apparel and cover was taboo. Imagine the consternation of the boys to be awakened about 2 a. m. to find a large fine looking woman pulling their toes, or sitting on the bed tickling them under the chin! What a mad scramble for cover that wasn't there, and for pants that had been mislaid!

Mr. James says he had more fun than a barrel of monkeys—till he tried to get that dress off—a feat that couldn't be accomplished unaided. He had to lie down and let some of the boys peel it off like skinning a rabbit.

J. N. Jones, overseer carding and spinning, was so afraid they would get something on him that he spent most of his time with a bunch of Salvation Army lassies.

E. L. Davis, supply clerk (they call him "cute little devil"), was hard to keep up with but that kodak caught him and he's still trying to "explain." He is champion dare-devil bicycle rider.

J. Riddle, slasher foreman, H. C. Wilson, cloth room, W. E. Owens, master mechanic, and his assistant, B. G. Mauney, must have been very circumspect, for nobody told us a thing about their activities at the beach. After all, Mr. Hamrick sagely remarked, "It wouldn't do to tell everything."

We are glad to add to our reading family at Phoenix the following new subscribers: J J. Riddle, slasher foreman; T. J. Ellison, section man in spinning; Frank Pressley, J. A. Lybrand, M. A. Guest and J. C. Hall, loom fixers who are interested in keeping posted.

MILL ROOF REPAIRED AND OFFICE REMODELED

Phoenix Mill roof is getting overhauled and other necessary improvements made. There are mighty fine people here who appreciate the chance to work for an honest living, on 8-hour shifts.

The mill office looked a little lonely with J. D. Smith out of town; but Mr. Hamrick and Miss Ruth Settlemeyer were on the job, and as jolly, friendly and helpful as ever.

The office has been completely remodeled and painted a clear ivory inside. There is a first aid room, sample room, directors' room and other offices, making a very commodious and complete arrangement.

THE MILL STORE

F. B. Glass, manager of the mill store, truly knows his business. The goods are attractively arranged and everything as clean as can be. He has a splendid market, well equipped for refrigeration, and not a fly or germ can enter here.

This store is for the accommodation of the people, but they are not under any obligation to trade here if they prefer to go elsewhere. However, prices here as as cheap as at any other store in town.

WOMAN'S FRIENDLY CLUB

This club sponsors flower yards and gardens and the mill pays from $1.00 to $10.00 in prizes for the best premises. Mrs. Boyd Putman is president of the club. Twenty-four club members recently spent a week-end at Myrtle Beach, stopping at Carolina Hotel,

THE NEISLER MILLS—Margrace, Patricia and Pauline Plants

Visiting Neisler Mills is like going to an art exhibit where every conceivable color is woven into amazingly beautiful designs in various kinds of fabric, such as bedspreads, blankets, napkins, draperies, window curtains, rugs, napkins, and other novelties in cotton and rayon.

The Messrs. Neisler—C. E. Neisler, Jr., president; J. A. Neisler, secretary, and P. M. Neisler, treasurer—are among the most progressive and best liked mill officials in the State.

Their mills are equipped with the best of machinery; the superintendents and overseers are efficient, kind and courteous, and the operatives are highly skilled, as the splendid products will prove.

G. C. Barber, overseer finishing, has my sincere thanks for courteous assistance. R. D. Miller is overseer of the sewing room; J. C. Jolly and Frank Roberts are the superintendents—one in carding and spinning and the other in weaving.

L. J. Cloninger is overseer weaving; R. P. Thomas, overseer dyeing; Wade Short, overseer plush weaving; R. H. Webb, overseer dyeing; Chas. H. Moss, overseer weaving in Patricia plant. There were several important key men that I did not get to see, as they were on another shift.

GREENSBORO, N. C.

POMONA MFG. CO.

Pomona Mfg. Co. is going better than I have ever seen it at this time of year. Also, the improvements that have been made the past year under the direction of that wonder-worker Gordon Cobb, are remarkable. Now he has resigned and left things in good hands, assured that the work will go right on without a hitch.

W. L. Clement, superintendent, has won a well-earned promotion, and R. A. Whatley, of Charlotte, one of the finest textile men in the South is superintendent. He had just arrived and gone on the job, looked a little bewildered but very alert and determined, and, knowing him as we do, we feel that Pomona people are to be congratulated in having him as their superintendent.

Few mills can boast of more varied products than this. In fact, the styles and patterns of the numerous goods run up into hundreds.

Heavy, 20 per cent wool cloth for men's wear; wool dress goods, Villa crepe, Shirley serge, upholstery, seat covers, draperies and window curtain cloth are only a few of the products.

THE KEY MEN

J. F. Dunn is overseer carding, with W. G. Allred and W. F. Sawyer, second hands; R. H. Higgins, overseer spinning, with Henry Edwards and M. C. Godfrey, second hands.

C. W. Phillips, overseer weaving; Charlie Hanner, J. A. Starnes and M. M. Roberts, second hands; G. F. Rosebury, finisher, with B. H. Barbour, second hand; J. R. Newell, overseer dyeing, certainly knows his job, as one can see at a glance at the rainbow hues in the cloth room.

SHELBY, N. C.

LILY MILL AND POWER CO.

The president of this busy plant is Mr. John F. Schenck, Sr., of Lawndale, where he is also the president of Cleveland Mill & Power Co., which manufactures carpet warps, yarns and twine.

The Lily Mill is one of the most interesting plants in the South, and the only one the writer has seen in this State, which makes, finishes and packs for market, spool thread ready for the sewing machine in all numbers and colors, plain and mercerized.

Lily Mill also manufactures high grade knitting and crochet yarns and embroidery floss in fast colors.

Messrs. J. W. Schenck, secretary, and John F. Schenck, Jr., treasurer and superintendent, are always on the job and always smiling.

A message sent to our Mr. Clark complimented him for his fearlessness and encouraged him to "Keep on keeping on."

ARCADIA, S. C.

MAYFAIR COTTON MILLS

There are two of these mills, just out of Spartanburg, and they are nice mills with attractive cillages.

Messrs. H. A. Ligon, president; W. P. Ligon, vice-president; N. B. West, secretary; S. C. Eaton, secretary, and W. S. Moore, general superintendent, are a group of gentlemen that merit the good will of all who are in these mills.

Charming Miss Allene Thompson, stenographer, fills the vacancy left by the young lady who, with her sister (a teacher) was killed at a railroad crossing several months ago.

Miss Nan Osborne, secretary to Mr. Ligon, isn't "as big as a minute," but makes up in efficiency and charm what she lacks in size.

In fact, everyone in this splendid office radiates happiness and good will.

The product of these mills is varied and lovely in quality and style. Some of the cotton goods are soft as silk and as pretty.

In the splendid big mill store there is a remnant department that delights the hearts of mothers who have a bunch of kiddies who want new clothes—or anyone who delights in bargains.

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WANTED—Experienced carder and spinner for North Carolina mill, on coarse numbers. A good job for the right man with opportunity for advancement. Give full details covering your experience and references. Address E. E. S., care Textile Bulletin.

Cotton Mills In India Are Busy

During May, the latest month for which statistics are available, consumption of Indian cotton by mills of that country was the largest on record for that month, and although exports declined they were well above the average, the exchange service reported. May consumption totalled 231,000 bales compared with the past five-year May average of 188,000 bales. Exports totalled 398,000 bales against a five-year average of 307,000.

"During the ten months of the season ending in May, Indian mills consumed a total of 2,232,000 bales compared with an average of 1,976,000 in the same period in the previous five years," the service said. "Exports by India aggregated 3,087,000 bales as against a five-year average of 2,422,000. In consequence of this large distribution during the current season, stocks of Indian cotton in all hands in India at the end of May were well below normal."—*New York Cotton Exchange Service.*

Classified Department

OVERSEER WANTED—For fine yarn mill with 25,000 spindles. Applicants must have been overseer in full charge of this class of work. Give experiences with references. Good pay. Address "Spinning," care Textile Bulletin.

FOR SALE CHEAP
CROMPTON & KNOWLES 90", 100", and 110" reed space Looms, 25 harness, 4 x 4 box, with individual motors and double beam stands, fully equipped and all ready to run. Address Box C. K., care Textile Bulletin.

WANTED
Odd lots Yarns suitable for twine, rope and woven mops. Any count, color, or put-up.
Summit Textile Co.
Summitt, Miss.

WANTED—A good weave room man for second shift for colored work, experienced in C. & K. 4x1 box looms with 16 and 20-harness double index dobbies; also experienced on Staffords 1x1 box with battery equipped with 20-harness gem heads; also a good loom fixer on above type looms. Address "Manufacturer," care Textile Bulletin.

WANTED—Job as Loom Fixer. 15 years experience on Crompton and Stafford Box Looms, silk, rayon and cotton. Reason for changing, mill closed indefinitely. Can come at once. Married; have family. Address "Fixer," care Textile Bulletin.

OVERSEER WANTED—For wool card room. Mill in South. Prefer man who has been accustomed to all wool and shoddies. Prefer a man from 35 to 40 years of age. Address "Wool," care Textile Bulletin.

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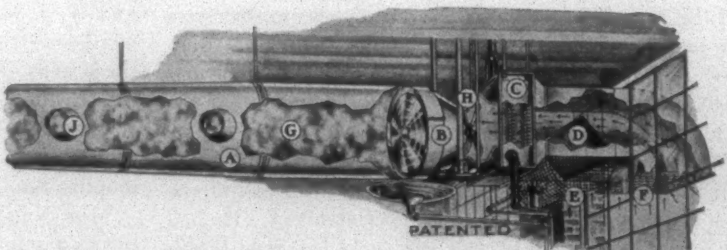

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Believes Texas Should Gain Rayon Industry

Austin, Tex.—Abundant raw materials for the manufacture of rayon make Texas the ideal location for the development of this industry, it is pointed out by Mrs. Clara H. Lewis of the University of Texas Bureau of Business Research in a recent series of articles in East Texas, publication of the East Texas Chamber of Commerce.

Mrs. Lewis points out that the latest directory of Texas manufacturers, compiled by the University Bureau, lists not a single manufacturer of rayon. Reports received by the bureau, however, show that rayon yarn produced in other sections of the country is used to some evtent by textile mills in this State for the manufacture of a number of products.

"In proportion to the value and extent of its natural resources, compared with the remainder of the United States, the industrial advantages of this State have not been widely developed," she added.

"Among the modern industries for which the State's natural resources and agricultural products are highly adaptable, none offers greater possibilities for development in Texas than does the manufacture of cellulosic products. The principal materials required for the production of synthetic fibers and plastics are cellulose, chemicals and water. Since Texas now produces within borders the raw materials necessary for the manufacture of rayon and since the demand for synthetic fibers and plastics continues its phenomenal growth, the possibilities for success of a plant of this nature at the source of its raw materials is apparent.

"The chief source of cellulose is cotton linters. Some of the analyses of unbleached cotton show as high as 90 per cent cellulose content. Cotton linters, the small fuzzy fibers covering the cotton seed, which are usually employed as the base material in the manufacture of rayon, yield an even higher cellulose content, as high as 98 per cent, or almost pure cellulose. Other sources of cellulose to be found in Texas are Southern pine, peanut hulls, corn stalks, cotton seed hulls and cotton stalks.

"Among the chemicals used in the manufacture of synthetic fibers of cellulose base, those derived from sulphur are of special importance, since sulphur by-products in some form are required in each of the four processes generally used. Although there has been some production of sulphur in other States, Texas produces more than 77 per cent of the domestic sulphur and most of the world supply."

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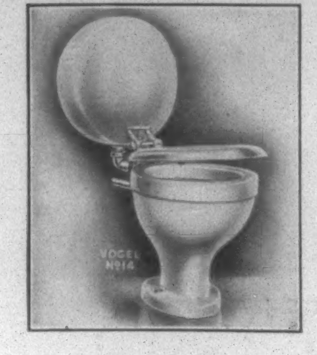

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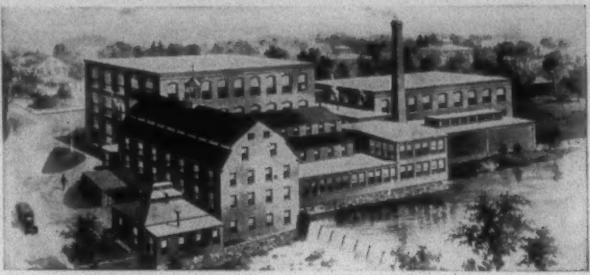

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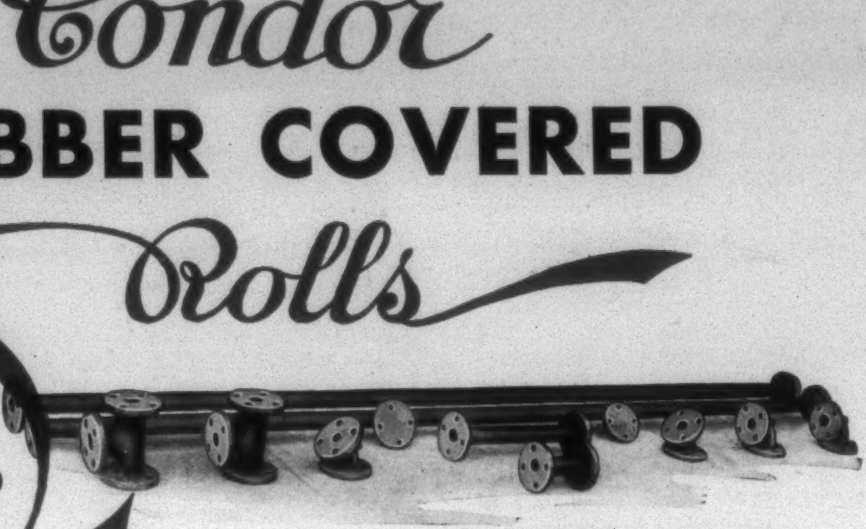

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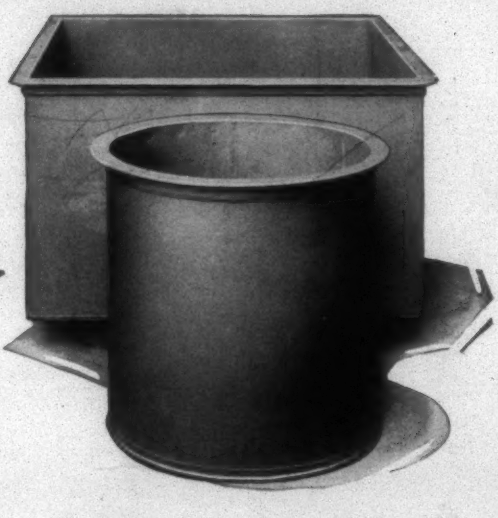

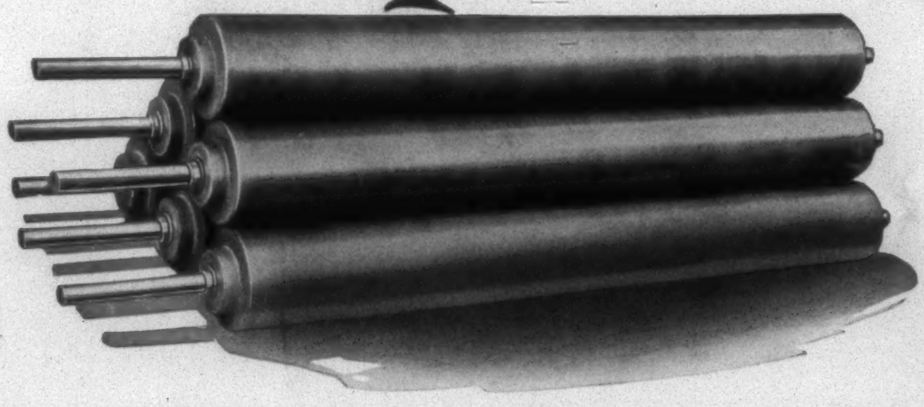

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